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BITUMINOUS COAL MINE ACCOUNTING

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BITUMINOUS COAL MINE ACCOUNTING

BY

W. B. REED

SECRETARY OF THE NATIONAL COAL ASSOCIATION,
CONSULTING ACCOUNTANT, FEDERAL TAXATION; FORMERLY AUDITOR, THE NEW RIVER COMPANY, THE WHITE OAK COAL COMPANY

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PREFACE

In response to numerous requests to the National Coal Association for suggestions and more detailed forms than contained in the "Report and Suggestions" of its Cost Accounting Committee, the author prepared a series of articles on "Cost Accounting in the Bituminous Industry" which were printed in *Coal Review*. To meet the desire of many who wish to have these articles in more permanent and usable shape arrangements have been made to issue them in book form. Several new chapters have been added, and the subject matter has been expanded. In their original scope the articles were intended to cover only cost matters, but in this book some questions of general accounting pertinent to the bituminous coal mining industry have been touched upon also.

The importance of proper accounting has probably never been more clearly felt than at the present time. The necessity for having an adequate cost accounting system has been stressed within the past few years by trade associations, government agencies and accountants generally.

In the coal industry this was a particularly important subject during the recent war, sales prices being fixed by the Fuel Administration based on cost. At all times a knowledge of the cost of production is an absolute prerequisite to price making. A corporation without a cost system is like a ship without a compass.

Business is conducted for the purpose of making a profit, and the business man is entitled to a margin between his cost and selling price. An adequate cost finding system is intended to eliminate guess work. To be of value to the industry such a cost system should be more than a historical record of transactions long closed.

It is questionable when a cost system is maintained merely for the purpose of history, whether it is worth the cost of its compiling. If this is its entire use the question might reasonably well be asked "How much does your cost system increase the cost of production?"

A cost system properly employed should be so arranged that it will tell from day to day the variations from a standard or theoretical cost. By its proper arrangement the management may feel each day, so to speak, the pulse of operation, and know from time to time what is happening in the industry. Knowing what is happening, those charged with the management are able to fix the responsibility and control the operation.

An adequate cost system must not only give current information, but must be a historical record as well, and being such a record, must tie intimately and accurately into the general accounting scheme.

The drafts and descriptions of forms which accompany the text are suggestions only and are not introduced with the idea that they are the only ones which can be used or are better than those prepared by accountants in the industry. The trained accountant familiar with the problems of his own organization will be better able to devise methods and detailed forms which will fit his particular organization and answer his particular problems than is one not on the ground. They are presented rather with the idea of being helpful in smaller organizations which have not had the benefit of expertly trained assistants.

In this book the assumption is that the general office and the mine office are located at different points and that the general office is dependent upon the local office for certain reports which will uniformly bring to the management and the accountant the pertinent facts connected with the operation, in order that the former may know what is happening from day to day, and that the latter may be able systematically to build up his accounts.

May I also add a word in behalf of the accountant. Too frequently the accounting department of an organization is looked upon by the management either as a useless expense or as a necessary adjunct which, although expensive, must be endured. Absolutely the reverse is the case. The well trained accountant, particularly the one who has spent some years with the business, is and should be in many respects one of the best informed and most valuable of the concern's officers or employees, and the accounting department one of the most valuable to all departments of the business.

The accountant should have advance information on all expenditures, that he may be able to lay his accounting plans accordingly and without delay. It is essential that he have this information, because to him falls the decision as to whether certain charges are capital accounts or items of expense. His must be a long-range vision. As charges come to him he must visualize them in their final resting place on the balance sheets. It is to him that the management and the directors must look for lucid statements of the cost of operation and of their financial affairs, and he should at all times be in their confidence.

Generally speaking, in corporations of medium size, the organization will take somewhat of the following form:

- Board of Directors
  - President
    - General Manager
      - Manager of Mines
        - Superintendents
          - Mine Foremen, Weigh Masters, Mine Clerks — Mine Staff
      - Accountant
        - Accounting Staff
      - Sales Mgr.
        - Sales Force
    - Treasurer
    - Secretary

This will vary, of course, according to the form of organization. In some cases the secretary and treasurer are responsible also to the general manager. In some instances the mine clerks and weighmasters are directly responsible to the general manager rather than to the local superintendent, and in some cases mine clerks are directly responsible to the accounting department.

Regardless of the form of organization there must be the closest kind of coöperation between the operating staff and the accounting department if proper results are to be achieved. The accountant should be consulted regarding any change of forms even if only remotely related to the accounting procedure.

The forms for cost accounting which accompany the text following are gathered from a number of sources; all have actually been used in bituminous coal mine accounting. Many are original forms prepared by the author; others have been prepared in the main by the accountants of various companies and adapted for use in the accounting of the mining companies with which the author was formerly connected. Acknowledgment is made to the Anthracite Operators for the general form of the balance sheet and the text which accompanies it. Both have been considerably changed to fit more nearly the needs of the bituminous mining industry.

W. B. Reed.

Washington, D. C.,
July, 1922.

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BITUMINOUS COAL MINE ACCOUNTING

CHAPTER I

UNIFORM COST ACCOUNTING

Prior to the World War little attention had been given by coal operators generally to the fundamentals of cost accounting. Some talked in terms of long tons, others in terms of short tons. Some few operators had a cost system which was complete and exhaustive, others had worked out a system not so complete. The larger number of the cost forms were either incomplete or misleading. In some sections of the country coal operators' associations had been formed for the study of economic conditions affecting the industry, and in this connection some attention had been given to the study of mining costs.

Shortly after the United States entered the war it became evident that power should be given the administration to control the necessities of life, primarily food and fuel. With this in view, the Lever Act, House Bill No. 4961, was passed by the Sixty-fifth Congress and approved by the President on August 10, 1917. It was officially entitled "An Act to Provide further for the National Security and Defense by Encouraging the Production, Conserving the Supply, and Controlling the Distribution of Food Products and Fuels." Under the provisions of this Act the Fuel Administration was set up, and after some preliminary study of such costs as were available it became the policy of the administration to fix selling prices by fields upon a basis of cost, plus a margin of profit fixed by the Fuel Administrator above a bulk line, which included the major portion of the tonnage of a given field or district.

In connection with the study of costs it became necessary that they be ascertained in a uniform manner. In furtherance of this plan the Federal Trade Commission in the fall of 1917 sent out a blank form of coal cost sheet to bituminous coal operators asking for a return of costs for the year 1917 to date of August 31. This form was probably the first attempt to secure uniform methods of cost accounting for the industry, and became, to some extent at least, the basis of such future attempts on the part of governmental agencies. The cost sheets thus obtained were turned over to the Engineers' Committee of the United States Fuel Administration for study, and the condition existing in the industry is well illustrated in the report of the Engineers' Committee of the United States Fuel Administration, published in 1919, from which the following quotation is made:

Without desiring to impugn either the honesty or the accuracy of the cost sheets as presented, it was found essential to study and adjust them for use as a basis of scientific and accurate cost finding. Besides correcting slips and palpable mathematical errors, a considerable amount of revision was necessary. Many, especially of the small operators, were inexperienced in bookkeeping and submitted cost sheets which, while accurate in totals, were grievously mixed in details.

Supplies.—The item of supplies was found to vary so widely in the same mines in different months that the returns for single months were practically abandoned, and the figures were replaced by averages from all reports available, resulting in increases or deductions from the monthly costs as reported.

Reserves.—The item of maintenance was frequently misunderstood, in some instances all supplies and much labor being charged to this account; in others a fixed sum, and in still other cases nothing at all was charged.

Depreciation was often put in as a guess; in some cases it was frankly stated that this seemed a good time to charge off improvements, and such were charged to the limit, and beyond.

Depletion of lands was also an item which appeared greatly to trouble some of the accountants. While generally understood, many very wild guesses, even up to the market price of the product, were found; also, many instances of depletion charges for lands operated on royalty or lease and not the property of the operator.

Contingent funds noted on the blank were generally omitted, but in a few cases, especially when the need of such funds had recently been felt, most ample allowances were made. After being considered, it was decided to apply in each district amounts obtained by studying the claims of the better operators of such district, after obtaining, from the best available sources, reliable figures as to the cost of lands and amount and value of improvements characteristic of the district.

The question of contingent reserves is a serious one. From a strict cost-accounting standpoint, no cost can be permitted until incurred. Nevertheless, such reserves are essential to an industry involving the great risk incident to coal mining, and with the full knowledge that such reserves are used only for major accidents or calamities, and that ordinary losses regularly incurred are charged to the cost of operation, it was decided to include a small amount for contingent reserve in the general allowance.

Salaries.—Executive and even superintendent's salaries were frequently omitted. In many cases of personal ownership, undoubtedly none were paid. It was considered only just to add to such returns reasonable allowances for salaries to place such reports on a parity with the majority of the operations which paid for such necessary service. On the other hand, occasional instances were found of reported salaries so excessive as to require adjustment downward to a reasonable parity with the general practice of the district.

The following sliding scale of salaries, adjusted within broad limits to the monthly tonnage of an operation, was finally devised. Reported salaries between these limits were accepted as correct. Those salaries missing or below the minimum were raised to the minimum, and those above the maximum were lowered to the maximum.

Salary Memorandum Used by the Committee

Monthly tonnage	Per month	Per ton per month cents
1,000 and under	$150 to $250	15 up.
2,000	160 to 400	8 to 20
3,000	180 to 450	6 to 15
4,000	200 to 480	5 to 12
5,000	200 to 500	4 to 10
7,500	250 to 600	3½ to 8
10,000	300 to 700	3 to 7
20,000	400 to 800	2 to 4
50,000	500 to 1,500	1 to 3
75,000	750 to 2,250	1 to 3
100,000	1,000 to 2,500	1 to 2½
Over 100,000		½ to 2

Special Charges.—Special charges were generally treated in detail, often spread over a reasonable time rather than allowed in a single month. In treating these a careful study of all reports available was made.

Special Records.—The Federal Trade Commission had required special explanation of all charges out of the ordinary, and all these records were available and were carefully studied and had great influence in deciding doubtful points.

Outside Profits.—The profits from farms, dwellings, or stores are not properly mining profits, and accounts of these should be kept separate from mining expense. Where it is found that such accounts are separated, no deduction for such profits should be made, but where dwellings, particularly, are so intimately connected with the mining that no separation is possible, it is proper to include their operation with mining accounts.

Fuel for Power.—In general, charges for fuel for colliery power were allowed, and the tonnage divisor was made to include such fuel. In the opinion of the committee it would, however, be advisable to eliminate colliery fuel from both sides of the account, and merely to keep a record of the amount used. By this method the tonnage divisor represents the amount shipped and sold, and is susceptible of accurate determination, while the fuel used is approximated, or even guessed at, too often to make the general records containing this item reliable.

Other items requiring occasional adjustment were the inclusion of washing costs, for which an extra charge is allowed, in the mining cost, and the inclusion of labor and supplies used in coking operations conducted by the same operators. In a few instances, the coke tonnage, or a mixed tonnage of coal and coke, was reported and used as a divisor to obtain costs per ton, resulting, of course, in a notably excessive cost.

On Jan. 1, 1918, the Federal Trade Commission issued a second form differing, to a considerable extent, from the form prepared by them during the year 1917. Costs were collected by the Federal Trade Commission from the coal producers on the basis of this report during the calendar year 1918, and these costs as revised by the Engineers' Committee of the United States Fuel Administration were the basis of the revised prices granted by the Fuel Administrator during the period in which the prices were under the control of the government.

With the beginning of the year 1919 the Federal Trade

Commission prepared a third form much more elaborate than those which had preceded it. This form was, in the opinion of coal operators and accountants who had made a study of coal costs, absolutely unworkable as a practical proposition because of the vexatious refinements of detail into which the items of cost were sub-divided. Failure of the Congress to make a sufficient appropriation for the Commission to carry on this work, coupled with the opposition raised by the operators and the veto of the Engineers' Committee of the United States Fuel Administration, resulted in the failure to introduce this form, and during the year 1919 no coal costs were collected by this agency of the government.

On Jan. 1, 1920, the Federal Trade Commission issued a fourth form embodying some of the features of the preceding ones, but very much abridged, and containing several departures from the preceding forms prepared by the Federal Trade Commission. Careful study of this form by accountants in the coal mining industry developed a strong objection to some of its features. To test the right of the Commission to require reports from coal operators in a form which practically meant the regulation of the manner of keeping books on the part of the coal industry, an injunction suit was instituted by the Maynard Coal Company asking the court to restrain the Federal Trade Commission from requiring such reports. This injunction suit was instituted only after conferences between representatives of the coal industry and the Federal Trade Commission in which it was apparent that the viewpoints of the industry and of the Federal Trade Commission could not be harmonized. The case was argued before Justice Bailey in the Supreme Court of the District of Columbia and an injunction was issued, and to date of this writing the case has not been vacated. On motion of the Federal Trade Commission this case came up before Justice Bailey on June 22, 1922, for argument as to the issuance of a permanent injunction. After argument the justice took the matter under advisement. In the Claire Furnace Company case in which the same questions are raised, Justice Bailey made the order permanent and the Federal Trade Commission has appealed to the higher courts.

The opinion of the judge who granted the injunction is important because of its bearing on other lines of industry. The opinion of Justice Bailey follows: The subheadings are mine.

This is an application for an injunction to restrain the Federal Trade Commission from taking steps to collect a penalty for failure on the part of the plaintiff, The Maynard Coal Company, to make certain reports called for by the Commission. The bill is supported by several affidavits of expert accountants. The defendant Commission has filed its answer, but on account of insufficient verification, it cannot be treated as an affidavit. It has also filed with its answer several affidavits, which will be noticed hereafter.

The plaintiff is a corporation engaged in the mining, production and sale of bituminous coal. It owns and operates mines in Kentucky and Ohio. Practically all of the coal mined in Kentucky and about one-half of the coal mined in Ohio is shipped to points without those States, and the remainder of that mined in Ohio to points in that State.

Plaintiff's Claim.—On January 31, 1920, the defendant Commission served upon a large number of coal-mining corporations, including the plaintiff, an order requiring them to report "monthly costs of production and other data," as set out in specification accompanying the order, for each calendar month of the year 1920 and until further notice. The information and reports required are very full and detailed as to production, sales, management, financial condition, depreciation, etc., and all to be calculated as prescribed in the specifications. The plaintiff claims, and from the affidavits filed such appears to be the fact, these reports cannot be made without a large change in the plaintiff's method of bookkeeping and accounting, and at a very considerable expense.

Commission's Claim.—The Commission claims that it may require these reports under the authority placed in it by the act of Congress creating the Commission approved September 26, 1914, and that Congress has the authority to so empower the defendant under the clause, known as the Commerce Clause of the Constitution of the United States:

"Congress shall have power . . . to regulate commerce with foreign nations and among the several States with the Indian Tribes."

The parts of the Federal Trade Commission Act pertinent to this inquiry are substantially as follows:

Commerce is defined, Section 4, as "commerce among the several States or with foreign nations, or in any Territory of the United States or with foreign nations, or between any such Territory and another, or between any such Territory and any State or foreign nation, or between the District of Columbia and any State or Territory or foreign nation."

Section 5 provides that unfair methods of competition in commerce shall be unlawful, and empowers the Commission to take steps to prevent such unfair methods and prescribes the procedure for carrying out such purpose.

Section 6 of the act provides: "That the Commission shall have power—

"a. To gather and compile information concerning, and to investigate from time to time the organization, business, conduct, practices, and management of any corporation engaged in commerce, excepting banks and common carriers subject to the act to regulate commerce, and its relations to other corporations and to individuals, associations, and partnerships.

"b. To require, by general or special orders, corporations engaged in commerce, excepting banks, and common carriers subject to the act, to regulate commerce, or any class of them, or any of them, respectively, to file with the Commission in such form as the Commission may prescribe, annual or special, or both annual and special, reports or answers in writing to specific questions, furnishing to the Commission such information as it may require as to the organization, business, conduct, practices, management, and relation to other corporations, partnerships, and individuals of the respective corporations filing such reports or answers in writing. Such reports and answers shall be made under oath, or otherwise, as the Commission may prescribe, and shall be filed with the Commission within such reasonable time as the Commission may prescribe, unless additional time be granted in any case by the Commission."

Subsection "c" authorizes the Commission, when a final decree has been entered against a corporation under the Anti-Trust Acts, to investigate the manner in which the decree is being carried out.

Subsection "d" authorizes the Commission, upon direction of the President of either house of Congress, to investigate alleged violations of the Anti-Trust Acts.

"f. To make public from time to time such portions of the information obtained by it hereunder, except trade secrets and names of customers, as it shall deem expedient in the public interest; and to make annual and special reports to the Congress and to submit therewith recommendations for additional legislation; and to provide for the publication of its reports and decisions in such form and manner as may be best for public information and use.

"g. From time to time to classify corporations and to make rules and regulations for the purpose of carrying out the provisions of this act.

"h. To investigate, from time to time, trade conditions in and with foreign countries where associations, combinations or practices of manufacturers, merchants, or traders, or other conditions, may affect the foreign trade of the United States, and to report to Congress thereon, with such recommendations as it deems advisable."

The defendant in its answer admits "that no complaint has been filed by or before it charging the plaintiff with unfair methods of competition or with the violation of the Federal Trade Commission Act or the Anti-Trust Acts and admits that the information sought to be secured from the plaintiff may not throw any light or have any bearing upon any possible violation of any of the acts aforesaid, but asserts that such information is sought for a lawful purpose within the scope of the powers conferred upon the defendant by Section 6 of the said Commission Act.

The authority of Congress to enact this legislation is claimed under the power to regulate commerce above set out. The reports demanded of the plaintiff are not limited to questions connected with the shipment of coal in interstate commerce or the contracts in reference to, or the prices of coal so shipped, but relate almost entirely to the mining of coal and the price at which it is sold, and the financial condition and operations of the company, and all without any attempt to limit the inquiry to matters pertaining to the coal shipped in interstate commerce.

In fact, the Commission in its answer "denies that the plaintiff has the right to segregate its business and to say that part of its business is interstate and part is intrastate, but in order to ascertain if defendant is engaged in commerce, the courts will look to the entire business transactions of the plaintiff, and if any part of its business is intrastate and a part interstate and the whole business is conducted under one organization, as is set forth and admitted in the plaintiff's bill, then the defendant insists that the plaintiff, considering its business as a whole (is engaged in) interstate commerce and the defendant has the right to ask the information sought.

And the information sought in this case is such as would apply as well to a corporation whose business was wholly intrastate as to the plaintiff. The defendant unquestionably is demanding information as to intrastate commerce and as to coal production, and frankly asserts the right to do so."

That there is a radical distinction between production and commerce is clear.

In *Kidd vs Pearson,* 128 U. S. 1, Mr. Justice Lamar said, page 20:

"Manufacture is transformation—the fashioning of raw materials into a change of form for use. The functions of commerce are different. The buying and selling and the transportation incidental thereto constitute commerce; and the regulation of commerce in the constitutional sense embraces the regulation at least of such transportation. The legal definition of the term, as given by this court in *County of Mobile vs Kimball,* 102 U. S. 691, 702, is as follows: 'Commerce with foreign countries and among the States, strictly considered, consists in intercourse and traffic, including in these terms navigation, and the transportation and transit of persons and property, as well as purchase, sale, and exchange of commodities.' If it be held that the term includes the regulation of all such manufactures as are intended to be the subject of commercial transactions in the future, it is impossible to deny that it would include all productive industries that contemplate the same thing. The result would be that Congress would be invested, to the exclusion of the States, with the power to regulate, not only manufactures, but also agriculture, horticulture, stock raising, domestic fisheries, mining—in short, every branch of human industry. For is there one of them that does not contemplate, more or less clearly, an interstate or foreign market? Does not the wheat grower of the Northwest, and the cotton planter of the South, plant, cultivate, and harvest his crop with an eye on the prices at Liverpool, New York, and Chicago? The power being vested in Congress and denied to the States, it would follow as an inevitable result that the duty would devolve on Congress to regulate all of these delicate, multiform, and vital interests—interests which in their nature are and must be, local in all the details of their successful management."

In *United States vs Knight,* 156 U. S. 1, page 12, Mr. Chief Justice Fuller said:

"Doubtless the power to control the manufacture of a given thing involves in a certain sense the control of its disposition, but this is a secondary and not the primary sense; and although the exercise of that power may result in bringing the operation of commerce into play, it does not control it, and affects it only incidentally and indirectly. Commerce succeeds to manufacture and is not a part of it."

In *Addyston Pipe & Steel Co. vs United States,* 175 U. S. 211, which involves the Anti-Trust Act of July 2, 1890, Mr. Justice Peckham, after holding that Congress under the power to regulate interstate commerce could not regulate any agreement on combination that operated upon the sale, transportation and delivery of an article of interstate commerce, on page 27, said:

"Although the jurisdiction of Congress over commerce among the States is full and complete, it is not questioned that it has none over that which is wholly within a state, and therefore none over combinations or agreements so far as they relate to a restraint of such trade or commerce. It does not acquire any jurisdiction over that part of a combination or agreement which relates to commerce wholly within a State, by reason of the fact that the combination also covers, and regulates commerce which is interstate. The latter it can regulate, while the former is subject alone to the jurisdiction of the State. The combination herein described covers both commerce which is wholly within a State and also that which is interstate.

"In regard to such of these defendants as might reside and carry on business in the same State where the pipe provided for in any particular contract was to be delivered, the sale, transportation and delivery of the pipe by them under that contract would be a transaction wholly within the State, and the statute would not be applicable to them in that case. They might make any combination they chose with reference to the proposed contract, although it should happen that some nonresident of the State eventually obtained it."

In *Delaware, Lackawanna & Western Railroad Co. vs Yurkonia,* 238 U. S. 439, a case involving the Federal Employers' Liability Act, Mr. Justice Day, page 444, said:

"The averments of the complaint as to the manner of the receiving of the injury by plaintiff showed conclusively that it did not occur in interstate commerce. The mere fact that the coal might be or was intended to be used in the conduct of interstate commerce after the same was mined and transported did not make the injury one received by the plaintiff while he was engaged in interstate commerce. The injury happening when the plaintiff was preparing to mine the coal was not an injury happening in interstate commerce, and the defendant was not then carrying on interstate commerce facts essential to recovery under the Employers' Liability Act."

In *Coe vs Errol,* 116 U. S. 517, it was held that logs cut in New Hampshire and hauled to Errol, N. H., to be transported to Maine were not in interstate commerce. Mr. Justice Bradley, page 525, said:

"When the products of the farms or forest are collected and brought in from the surrounding country to a town or station serving as an entrepot for that particular region, whether on a river or a line of railroad, such products are not yet exports, nor are they in process of exportation, nor is exportation begun until they are committed to the common carrier for transportation out of the State to the State of their destination, or have started on their ultimate passage to that

State. Until then it is reasonable to regard them as not only within the State of their origin, but as a part of the general mass of property of that State, subject to its jurisdiction, and liable to taxation there, if not taxed by reason of their being intended for transportation, but taxed without any discrimination, in the usual way and manner in which such property is taxed in the State."

On page 528, he said:

"It is true, it was said in the case of the *Daniel Ball,* 10 Wall, 557, 565: 'Whenever a commodity has begun to move as an article of trade from one State to another, commerce in that commodity between the States has commenced. But this movement does not begin until the articles have been shipped or started for transportation from the one State to the other. The carrying of them in carts or other vehicles, or even floating them, to the depot where the journey is to commence is no part of the journey. That is all preliminary work, performed for the purpose of putting the property in a state of preparation and readiness for transportation. Until actually launched on its way to another State, or committed to a common carrier for transportation to such State, its destination is not fixed and certain. It may be sold or otherwise disposed of within the State, and never put in course of transportation out of the State. Carrying from the farm or forest, to the depot, is only an interior movement of the property, entirely within the State, for the purpose, it is true, but only for the purpose, of putting it into a course of exportation; it is no part of the exportation itself. Until shipped or started on its final journey out of the State it is a matter altogether in fieri, and not at all a fixed and certain thing."

In order for the Federal Trade Commission to have the power to require the plaintiff to make reports as to the mining of coal and as to its intrastate shipments, it must appear that this information is necessary to or connected with some subject over which the general government has power. There is no claim made that there is any proceeding pending, involving the Anti-Trust Act, or unfair methods of competition, or under the Clayton Act, but in its order defendant demands reports in all the business of the plaintiff.

The defendant relies upon the visitorial powers of Congress over corporations. In this connection it must be borne in mind that the power of Congress over an instrumentality of commerce, such as a common carrier, is far different from its powers over an ordinary business corporation which merely ships its products or a portion of its products over such carrier. In fact, as said by Mr. Justice Holmes in *Smith vs Interstate Commerce Commission,* 245 U. S. 33, on page 45, "It is not far from true—it may be it is entirely true, as said by the Commission (referring to the Interstate Commerce Commission)—that there can be nothing private or confidential in the activities and expenditures of a carrier engaged in interstate commerce."

Powers of Congress.—Apart from the fact that plaintiff is a corporation, it is clear that Congress could not compel the production of the private books and papers of a citizen, except in the progress of judicial proceedings.

Kilbourne vs Thompson, 103 U. S. 168,

Harriman vs Interstate Commerce Commission, 211 U. S. 407.

Mr. Justice Field then sitting on the Circuit Court, in the case of *In re Pacific Railway Commission,* 32 Federal Reporter 241, said:

"And in addition to the inquiries usually accompanying the taking of a census, there is no doubt that Congress may authorize a commission to obtain information upon any subject which, in its judgment, it may be important to possess. It may inquire into the extent of the productions of the country of every kind, natural and artificial, and seek information as to the habits, business, and even amusements of the people. But in its inquiries it is controlled by the same guards against the invasion of private rights which limit the investigations of private parties into similar matters. In the pursuit of knowledge it cannot compel the production of the private books and papers of the citizen for its inspection, except in the progress of judicial proceedings, or in suits instituted for that purpose, and in both cases only upon averments that its rights are in some way dependent for enforcement upon the evidence these books and papers contain."

(And again on page 254):

"But in accordance with the principles declared in the case of *Kilbourne vs Thompson,* and the equally important doctrines announced in *Boyd vs United States,* the commission is limited in its inquiries as to the interest of these directors, officers and employees in any other business, company or corporation, or to such matters as these persons may choose to disclose. They cannot be compelled to open their books, and expose such business to the inspection and examination of the Commission. They were not prohibited from engaging in any other lawful business because of their interest in and connection with the Central Pacific Railway Company, and that other business might as well be the construction and management of other railroads as the planting of vines, or the raising of fruit, in which some of these directors and officers and employees have been in fact engaged. And they are entitled to the same protection and exemption from inquisitorial investigation into such business as any other citizen engaged in like business."

But the Commission claims that, inasmuch as the plaintiff is a corporation, it has the authority claimed under the visitorial power of Congress. That the power sought is visitorial in its nature is clear.

For in order to give the information and make the reports required, it will be necessary (that it is, so appears from the affidavits on file) for the plaintiff to keep records and books in addition to those now kept by it and by other corporations engaged in a like business, at a considerable expense, and to make monthly reports based on calculations made from such records. This is not the simple obligation of a witness under a subpoena duces tecum, to answer questions and to produce books and records for inspection, but in addition to keep records and make calculations and reports. Such a burden cannot be imposed upon an ordinary witness.

Northern Pacific Railway Co. vs Keyes, 91 Federal Reporter 47.

4 Wigmore No. 2203, page 2989.

The Commission contends that the order served upon the plaintiff does not undertake to prescribe methods of bookkeeping, nor to keep additional records, but under the allegations of the bill and the affidavits filed, I am of the opinion that this contention cannot be sustained. The plaintiff cannot comply with the orders of the Commission without changing its methods of bookkeeping.

That the Act undertakes to vest such powers (certainly as to matters connected with interstate commerce) in the Commission is clear from Section 10 of the Act which provides penalties for any person who shall willfully "neglect or fail to make or cause to be made, any false entry in any account, records or memorandum kept by any corporation subject to this act, or who shall willfully neglect or fail to make full, true and correct entries in such accounts, records or memoranda of all facts and transactions appertaining to the business of such corporation." These powers could only be justified under visitorial power.

It has been held that Congress has such visitorial power over corporations engaged in interstate commerce in *Wilson vs United States,* 221 U. S. 361, and in *Ellis vs Interstate Commerce Commission,* 237 U. S. 434, but in these cases the power was limited to that portion of the business which was under the control of the Federal Government.

No such power would seem to exist, however, as to other matters, and the two cases referred were cases in which subpoena duces tecum has been issued, requiring the production of a corporation's books in the one case before a grand jury investigating charges of fraudulent use of the mail and in the other before the Interstate Commerce Commission. And in the latter case the Court, through Mr. Justice Holmes, on page 444 (237 U. S.) said:

"If the price paid to the Armour Car Lines was made the cover for a rebate to Armour & Co., or if better cars were given to Armour & Co. than to others, or if, in short, the act was violated, the railroads are responsible on proof of the act. But the only relation that is subject to the Commission is that between the railroads and the shippers. It does not matter to the responsibility of the roads whether they own or simply control the facilities, or whether they pay a greater or less price to their lessor. It was argued that the Commission might look into the profits and losses of the Armour Car Lines (one of the matters inquired about) in order to avoid fixing allowances to it at a confiscatory rate. But the Commission fixes nothing as to the Armour Car Lines except under No. 15 in the event of which we shall speak."

"The appellant's refusal to answer the series of questions put was not based upon any objection to giving much of the information sought, but on the ground that the counsel who put them avowed that they were the beginning of an attempt to go into the whole business of the Armour Car Lines—a fishing expedition into the affairs of a stranger for the chance that something discreditable might turn up. This was beyond the powers of the Commission. *In re Pacific Railway Commission,* 32 Federal Reporter 241. *Interstate Commerce Commission vs Brimson,* 154 U. S. 447, 478, 479. *Harriman vs Interstate Commerce Commission,* 211 U. S. 407. The Armour Car Lines not being subject to regulation by the Commission, its position was simply that of a witness interested in but a stranger to the inquiry, and the Commission could not enlarge its powers by making the company a party to the proceedings and serving it with notice. Therefore the matter to be considered here, subject to the qualification that we are about to state, is how far an ordinary witness could be required to answer the questions that are before the Court."

In the case of a corporation doing a wholly intrastate business, could it be said that Congress had any visitorial power under the Commerce Clause of the Constitution of the United States? Clearly it has not. The fact that it happens to be the same corporation in this instance which mines and ships the coal does not give Congress any greater powers to regulate production and the intrastate commerce of such corporation.

The visitorial power of Congress is limited to that part of the business over which it has control, and which under the Constitution it has the power to regulate.

In *Hammer vs Dagenhart,* 247 U. S. 251, it is said (page 260):

"While the power to regulate commerce among the several States is in the same grant and in the same terms with the power over foreign commerce, yet there is a difference with respect to the extent of that power growing out of the difference in the relation of the United States to the two kinds of commerce, and the difference in the right of the citizen of the United States and the foreigner to engage therein. As to foreign commerce, the United States possesses and exercises all the attributes of sovereignty. As to interstate commerce, it exercises only that portion of sovereignty delegated to it."

(And again, page 261):

"However much the *Knight* case, 156 U. S. 1, may be weakened by later decisions, its distinction between production and commerce is still effective to prevent direct congressional regulation of production as distinguished from sale and transportation."

The power claimed by the Commission is vast and unprecedented. The mere fact that a corporation engaged in mining, ships a portion of its product to other States does not subject its business of production or its intrastate commerce to the powers of Congress.

Doubtless the business of every coal-mining corporation, whether engaged in interstate business or not, to some extent affects interstate prices and commerce, but, as stated in *United States vs King,* 156 U. S. 1 (above), "The power to control the manufacture of a given thing involves in a certain sense the control of its disposition, but this is a secondary and not the primary sense."

No sound reason is given why there is any difference in the business of coal mining of a corporation which ships its coal to another State and that of a corporation which does not. Interstate commerce is not affected any more in the one case than in the other.

Concerning Search and Seizure.—In the case of *United States vs Basic Products Co.,* 260 Federal Reporter 472, in which it was urged that Section 6 of this act was unconstitutional, not only in so far as it authorized investigation and compulsory disclosure of matters which are beyond the commercial powers of Congress, but also in so far as it attempted to authorize a search or seizure by an administrative agency of the Government without charge or suspicion, Justice Orr of the District Court of the Western District, Pennsylvania, said:

"While the contention of counsel is probably sound, this Court does not deem it necessary to go further than to hold that the Commission has not the power to carry on investigations which it has assumed in the present case."

In the same decision he also said:

"Imagination, if not experience, can suggest that persons, partnerships, and corporations may be engaged in interstate commerce by the transportation of merchandise solely by water; that their activities may give them their income from lighterage; or they may be engaged in the sole business of forwarding goods, with no interest in the vessels or wagons on which they are transported. The foregoing are merely the illustrations of activities which may perhaps be within the scope of the powers granted to the Commission by the act as found in the fifth section thereof."

"Imagination, however, cannot suggest such an extension of constitutional limitation as may justify the investigation undertaken by the Commission in this case. Indeed, so far as it has been brought to the attention of the Court no such assertion of power has ever been made to the courts. Investigation under subdivision 'a,' section 6, is limited to corporations engaged in interstate commerce. The defendant is engaged in manufacture."

I am of the opinion, therefore, that no such visitorial power as that claimed by the Commission in the instant case has been vested in Congress by the Constitution, nor could Congress delegate such power to the Commission.

But did Congress undertake to vest such power in the Commission? It is the duty of the courts, if possible, to give the statute a construction which would not conflict with the Constitution.

Knight Templar Co. vs Jarman, 187 U. S. 197, 205.

The corporations referred to in the Act are, by its terms, limited to those engaged in "commerce" as defined in the Act, and all the powers vested in the Commission should be and it seems may be construed with this limitation.

But the Commission has undertaken to construe the Act otherwise, and to take steps under its construction of the Act to require information and reports not relating to interstate commerce, but relating chiefly or wholly to production, and under its order the information which it has the power to demand cannot be separated from that over which it has no control.

While as in other matters, as stated in *In re Pacific Railway Commission,* supra, Congress may authorize the Commission to obtain information upon any subject which, in its judgment, it may be important for it to possess, it may not compel the production of such information in respect to matters over which the Federal Government has no control.

It follows, therefore, that the Commission cannot compel the making of the reports which it has demanded of the plaintiff.

The plaintiff further contends that this power of the Commission has been taken away by Presidential order. Much proof, in the form of affidavits, has been introduced by the defendant to show contemporaneous constructions of this order, and that the power claimed by the Commission in this case was not taken from it. The order is ambiguous, but, in view of my opinion as to the power of the Commission, it is not necessary to decide this question in passing upon the application for a preliminary injunction.

Section 10 of the Act provides that "if any corporation required by this Act to file any annual or special report shall fail to do so within the time fixed by the Commission for filing the same, and such failure shall continue for thirty days after notice of such default, the corporation shall forfeit to the United States the sum of $100 for each and every day of the continuance of such failure, which forfeiture shall be payable into the Treasury of the United States, and shall be recoverable in a civil suit in the name of the United States brought in the district where the corporation has its principal office or in any district in which it shall do business."

The plaintiff has failed to file the report demanded and the Commission has notified it that steps will be taken to recover the penalty prescribed above. The jurisdiction of a court of equity is not questioned by the defendants, and as I am of the opinion that the Commission has not the power to exact the reports and information sought, the injunction prayed for will issue upon plaintiff executing bond with surety to be approved by the Court in the penalty of $5,000.

Following this injunction the Federal Trade Commission continued for several months to receive data with respect to coal costs from those who sent in the reports voluntarily. The volume of these gradually decreased to a point where the tonnage reported was no longer representative, and about the middle of the year 1920 the Federal Trade Commission discontinued the compilation of coal costs. The various forms prepared by the Federal Trade Commission are reproduced as a matter of history.

Form Prepared by Federal Trade Commission for 1919.—(Costs were never collected on this form on account of lack of funds to carry on the work.)

The 1919 Cost Sheet.—The Federal Trade Commission's cost sheets for 1919 which was sent to coal operators in mimeographed form were never actually put into use. The cost sheets as planned provided a number of schedules in which labor and supplies were separated. The balance sheet for that year which formed a portion of the report was practically duplicated in the forms issued for the year 1920 and for that reason will here be passed over.

The following tabulation shows the accounts in the sequence in which they appeared in the profit and loss sheet, this sheet being supported by detailed schedules:

ACCOUNTS	
Sales and Transfer of Coal	
Commercial Sales	(Schedule 1)
Departmental Transfers	(Schedule 1)
Purchased Coal Sales—Commercial	(Schedule 1)
Purchased Coal to Departments	(Schedule 1)
Total Sales	
Allowances	
Freight Prepaid and Charged, if any	
Total Deductions	
Net Sales	
Cost of Sales	
Mining	(Schedule 2)
Ventilation	(Schedule 3)
Drainage	(Schedule 4)
Yardage and Dead Work	(Schedule 5)
Stripping	(Schedule 6)
Haulage	(Schedule 7)
Tipple Operating	(Schedule 8)
Preparation—Commercial Coal	(Schedule 9)
Power	(Schedule 10)
Mine Overhead	(Schedule 11)
Fixed Charges to Mining	(Schedule 12)
Other Charges to Cost	(Schedule 13)
Total—Gross Mine Cost	
Deduct—Credits to Cost	(Schedule 14)
Net Mine Cost	Tons
Inventory of Coal Beginning of Period (Add)	Tons
Total	
Inventory of Coal End of Period (Deduct)	Tons
Total	
Selling Expenses	(Schedule 15)
General Expenses and Administration	(Schedule 16)
Cost of Production	
Purchased Coal Cost	
Total Cost of Sales	
Profit from Coal Sales	
Miscellaneous Income (Add)	(Schedule 17)
Total	
Deductions from Income (Deduct)	(Schedule 18)
Net Income	

FORM 1.—Profit and Loss Account

The profit and loss sheet was followed by a Coal Sales Statement which called for information as to production and realization of and for the various sizes and the disposition of the production, such as Local Deliveries, Sales to Consumers, Sales to Other Coal Operators, Sales to Railroads other than Those Owned, and departmental transfers specified as Coal to Own Coke Ovens, Coal used by Own Railroads, Steamboats, etc. Similar accounts were provided for Purchased Coal statistics.

The following tabulation represents the Coal Tonnage Statement, designated Schedule 1a and shows the rather unusual method of arriving at the tonnage produced, and the divisor of cost:

DESCRIPTION	
Production of Coal (Per Tipple Weights)	
Coal to Power-house (Per Tipple Weights)	
Coal sent for Preparation (Per Tipple Weights)	
Coal Realized on after Preparation (Per Mine Weights)	
Tonnage of Slate and Waste Unrealized on	
% of Preparation Loss as to Tonnage Sent for Preparation	(%)
% of Preparation Loss as to Production	(%)
Total Coal Not Realized on	
Net Production of Coal (Divisor)	
Coal Stored at Mine at Beginning of Period	
Coal Stored at Mine at End of Period	
Increase or Decrease	
Coal to be Accounted for	
Departmental Transfers (Per Tipple Weights)	
Sales: (Per Railroad Weights)	
Prepared	
Run of Mine	
Slack	
Total Sales	
Coal in Transit not Invoiced	
Total Sales, Transfers, and Coal in Transit	
Net Production Not Accounted for	
% of Shipping Loss as to Tonnage to be Accounted for	(%)
% of Shipping Loss as to Production	(%)
COAL SHIPPED FROM MINES	
By Rail	
By Water	
By Wagon or Truck	
Total Shipments	

FORM 2.—Coal Tonnage Statement (Schedule 1a)

The voluminous details of the profit and loss accounts required to be kept as contained in Schedules 2 to 18 inclusive follow:

ACCOUNTS	
Mining	(Schedule 2)
Pick	tons @
Machine	tons @
Other Mining	tons @
Company Coal	tons @
Mining Machine Repairs	
Total	
Timbering	
Total Mining	

FORM 3.—Schedules to Profit and Loss Account

Form 3.—Schedules to Profit and Loss Account—Continued

Ventilation	(Schedule 3)
Operation	
Equipment Repairs	
Total Ventilation	
Drainage	(Schedule 4)
Operation	
Equipment Repairs	
Total Drainage	
Yardage and Dead Work	(Schedule 5)
Grading	
Removal of Slate and Waste	
Driving Entries (not included under Development)	
Total Yardage and Dead Work	
Stripping	(Schedule 6)
Stripping Clay and Rock	
Removing and Loading Coal	tons
Contract Stripping and Loading	tons @
Equipment Repairs	
Total Stripping	
Haulage	(Schedule 7)
Animal	
Mechanical	
Equipment Repairs	
Stable Expense	
Total Haulage	
Tipple Operating	(Schedule 8)
Operation	
Equipment Repairs	
Box Car Loading	
Switching to Main Railroad Tracks	
Total Tipple Operating	
Preparation—Commercial Coal	(Schedule 9)
Screening (Tons over Screens)	tons
Operation—Picking Table	
Disposal of Waste	
Equipment Repairs	
Total Screening	tons
Washery (Tons Washed)	tons
Operation	
Disposal of Waste	
Equipment Repairs	
Total Washery	
Total Preparation	
Power	(Schedule 10)
Generating Power (Exclude own Fuel)	
Equipment Repairs	
Purchased Power	
Total Power	
Mine Overhead	(Schedule 11)
Superintendence	
Engineering	
General Inside Labor	
General Outside Labor	

FORM 3.—Schedules to Profit and Loss Account—Concluded

Mine Office (Clerks and Supplies)	
Insurance—Liability and Compensation	
Welfare Work at Mine	
Ordinary Repairs to Buildings	
Total Mine Overhead	
Fixed Charges to Mining	(Schedule 12)
Royalty, Current	tons @
Depletion	tons @
Depreciation	
1 Structures	%
2 Equipment	%
3 Development	tons @
Rental of Equipment	
Total Fixed Charges to Mining	
Other Charges to Cost-Specify	(Schedule 13)
Extraordinary Repairs to Buildings	
Extraordinary Repairs to Equipment	
Total Other Charges to Cost	
Credits to Costs-Specify	(Schedule 14)
Explosives and other Miners' Supplies	
Revenue from Smithing	
Revenue from Heat, Light and Power	
Revenue from Houses (Dwellings)	
Total Credits to Costs	
Commissions	
Advertising	
Salesmen's Salaries	
Traveling Expenses	
Total Selling Expenses	
General Expenses and Administration	(Schedule 16)
Officers' Salaries	
Officers' Expenses	
Office and Clerical Salaries	
General Office Expense	
Insurance, General	
Taxes (Except Income and Excess Profit)	
Total General Expenses and Administration	
Miscellaneous Income	(Schedule 17)
Stores	
Transportation Facilities—Railroad	
Transportation Facilities—Floating	
Coke Sales $ Less Cost $	
Royalty from Owned or Leased Lands	
Interest on Securities Owned	
Dividends on Stocks Owned	
Total Miscellaneous Income	
Deductions from Income	(Schedule 18)
Taxes (Income and Excess Profits)	
Interest on Bonds	
Other Interest	
Bonus to Officers	
Bonus to Employes	
Total Deductions from Income	

Form C-1
F. T. C.

FEDERAL TRADE COMMISSION

File No.——

SEMIBITUMINOUS, BITUMINOUS OR SUBBITUMINOUS COAL OR LIGNITE

Report on Cost, Income and Tonnage for Month of————1918

———— (Full name of reporting operator) ———— (Address of principal office)

Line No.	Account No.	ACCOUNTS	Amount (current month)	Per ton*	Amount Jan. 1, to and including current month	Per ton†
			$ c.	$ c.	$ c.	$ c
1	51.	LABOR:				
2	a	Mining				
3	b	Yardage and dead work				
4	c	Haulage				
5	d	Tipple				
6	e	Removing stripped coal				
7	f	Power				
8	g	Washery				
9	h	Other operating labor				
10	i	Maintenance and repairs:				
11		1. Structures				
12		2. Equipment				
13	j	Superintendence and engineering				
14		TOTAL LABOR				
15	52	SUPPLIES:				
16	a	Mine timbers				
17	b	Feed and other stable supplies				
18	c	Power house fuel, ... tons, @ $........				
19	d	Power purchased				
20	e	Water purchased				
21	f	Washery supplies, including water				
22	g	Other operating supplies				
23	h	Maintenance and repairs:				
24		1. Structures				
25		2. Equipment				
26		TOTAL SUPPLIES				
27		TOTAL LABOR AND SUPPLIES (add lines 14 and 26)				
28	53.	DEBITS AND CREDITS TO COST: (credits in red)				
29	a	Profit or loss on explosives and miners' supplies				
30	b	Revenue from smithing				
31	c	Revenue from heat, light and power				
32	d	Miscellaneous debits and credits				
33		TOTAL DEBITS AND CREDITS				
34		TOTAL OPERATING COST (take line 27 and add or deduct 33)				
35	54.	FIXED CHARGES AND GENERAL EXPENSES:				
36	a	Royalty, tons				
37	b	Depletion, tons .... @ $..........				
38	c	Depreciation:				
39		1. Structures				
40		2. Equipment				
41		3. Development				
42	d	Deferred charges: (pro-rated)				
43		1. Stripping				
44		2. Royalty (unrecoverable)				
45	e	Taxes (except income and excess profits)				
46	f	Insurance—general				
47	g	Insurance—liability or workmen's compensation				
48	h	Officers' salaries and expenses ....%				
49	i	Clerical salaries and office expenses ....%				
50	j	Legal expenses				
51	k	Miscellaneous				
52		TOTAL FIXED CHARGES AND GENERAL EXPENSES:				
53		TOTAL MINING COST (add lines 34 and 52)				

*Line 130 (M) is the divisor to be used to determine the rate per ton for lines 2 to 53 inclusive.
†Line 130 (N) is the divisor to be used to determine the rate per ton for lines 2 to 53 inclusive.

Name of Operator———— Filed———— Date———— File No.————
(For use of the Federal Trade Commission only)

FORM 5.—Federal Trade Commission coal report blank for 1918.

(41) Officers' salaries and expenses,	
(42) Other office salaries and expenses,	
(43) Miscellaneous,	
(44)	
(45) Total Selling Expense,	
III. OTHER EXPENSE	
(46) Taxes. Income and excess profit,	
(47) Interest,	
(48) Sinking fund,	
(49)	
(50) Total Other Expense,	
(51) CAPITAL AND MAINT. RESERVE CHARGES:	
(52) Improvements,	
(53) Developments,	
(54) Maintenance,	
(55)	
(56) Total Capital and Maint. Reserve Charges,	
(57) SUPPLIES:	
(58) Supplies on hand 1st of month,	
(59) Supplies purchased during month,	
(60) Total,	
(61) Supplies used during month,	
(62) Supplies on hand end of month,	

(101) Coke,	
(102) Power-house fuel,	
(103) Total Sales,	
(104) Add	
(105) Inventory, end of month,	
(106) Total,	
(107) Deduct	
(108) Inventory 1st of month,	
(109) Purchased coal,	
(110) Total deductions,	
(111) Production,	
(112) Kind of coal,	
(113) Name or number of seam,	
(114) Thickness of seam,	
(115) Number of mines,	
(116) Remarks:	

Approved and Certified Correct: ____________ (Name) (Title)

THIS REPORT MUST BE SIGNED BY AN OFFICER OF THE COMPANY

Form 4.—Federal Trade Commission bituminous coal report blank.

(Facing p. 22.)

The information required by this report is ordered to be furnished pursuant to the power of the Commission under subdivision b of section 6 of "An Act to create a Federal Trade Commission, to define its powers and duties, and for other purposes," and under paragraph 12, section 25, of "An Act to provide further for the national security and defense by encouraging the production, conserving the supply and controlling the distribution of food and fuel," which is as follows:

"The books, correspondence, records, and papers in any way referring to transactions of any kind relating to the mining, production, sale, or distribution of all mine operators or other persons whose coal and coke have or may become subject to this section, and the books, correspondence, records, and papers of any person applying for the purchase of coal and coke from the United States shall at all times be subject to inspection by the said agency"

PENALTIES

Failure to mail this report within the time required will subject the corporation to a forfeiture of the sum of $100 for each and every day of the continuance of each failure. Section 10, Federal Trade Commission Act.

Any person who shall wilfully make or cause to be made any false entry or statement of fact in this report shall be subject to a fine of not less than $1000 nor more than $5,000, or imprisonment for a term of not more than three years or to both such fine and imprisonment. Section 10, Federal Trade Commission Act.

Line No.	Account No.	ACCOUNTS	Amount (current month)	Per ton*	Amount Jan. 1 to and including current month	Per ton†
55	55.	SELLING COST:	$ c.	$ c.	$ c.	$ c.
56	a	Commissions				
57	b	Advertising				
58	c	Salesmen's salaries and expenses				
59	d	Officers' salaries and expenses ....%				
60	e	Clerical salaries and office expenses ....%				
61	f	Uncollectible accounts				
62	g	Miscellaneous				
63		TOTAL SELLING COST				
64		TOTAL MINING AND SELLING COST (add lines 53 and 63)				
65		INCOME STATEMENT.	$ c.		$ c.	
66	56.	COAL SALES (line 121, columns F and G)				
67	57.	COST OF COAL SOLD:				
68	a	Purchased coal cost				
69	b	Coal inventory, deduct increase, add decrease (line 124 or 125, col. K)				
70	c	Mining and selling cost (line 64)				
71		TOTAL COST OF COAL SOLD				
72		PROFIT FROM COAL (subtract line 71 from 66)				
73	58.	MISCELLANEOUS INCOME: (Net)				
74	a	Dwellings				
75	b	Commissaries or stores				
76	c	Transportation facilities				
77	d	Coke				
78	e	Other non-mining physical properties				
79	f	Royalty, tons				
80	g	Miscellaneous: (itemize)				
81		1.				
82		2.				
83		3.				
84		TOTAL MISCELLANEOUS INCOME				
85		TOTAL INCOME (add lines 72 and 84)				
86	59.	DEDUCTIONS FROM INCOME:				
87	a	Taxes (income and excess profits)				
88	b	Interest				
89						
90		TOTAL DEDUCTIONS				
91		NET INCOME (subtract line 90 from 85)				
92		CHARGES TO FIXED ASSETS				
93		Surface lands				
94		Coal				
95		Structures				
96		Equipment				
97		Development				
98		TOTAL				

Approved and Certified Correct:

To be signed by reporting operator.

(Name and title of officer.)

*Line 110 (F) is the divisor to be used to determine the rate per ton for lines 56 to 63 inclusive.
†Line 110 (G) is the divisor to be used to determine the rate per ton for lines 56 to 63 inclusive.

FORM 5.—Federal Trade Commission coal report blank for 1918 (continued).

COAL

SIZES				Power House Fuel (B)		Coal To Coke Ovens* (C)		Sales Tonnage (include purchased, washed and stripped coal)			
Name (A)	Description of Screen							Local (D)		Other than local (E)	
	Perforated or Bar	Size of Opening (Inches)									
		Over	Thru.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.
100											
101											
102											
103											
104											
105											
106											
107											
108 Slack											
109 Run of Mine											
110 TOTAL											

COAL

	$	c.	$	c.	$	c.	$	c.
111								
112								
113								
114								
115								
116								
117								
118								
119 Slack								
120 Run of Mine								
121 TOTAL								

GENERAL INFORMATION

Number or name of Mine	No. Days Wk'd	Cause of Idle Days	Average No. of men employed per day wk'd		Location of Mines			Kind of Coal ‡	Number or Name of Seam	Average Thickness of Seam (inches)
			Miners	Day Men	State	County	Field			
131										
132										
133										
134										
135										
136										
137										
138										
139										
140										
141										

REMARKS		Tons		Dollars	
142	Shipped from Collieries:	......	..	......	..
143	By water			......	..
144	By rail			......	..
145	Sold to Railroads				
146	Used on Railroads owned				
147	by reporting operator				
148					
149					
150					
151					
152					

* __________Tons of coal yield one ton of coke.
‡ Semi-bituminous, cannel, splint, bituminous, sub-bituminous or lignite.

FORM 5.—Federal Trade Commission coal report blank for 1918 (continued).

TONNAGE (2,000 POUNDS)

Total for current month of ______ 1918 (Add B, C, D and E) (F)		Accumulated total Column F, Jan. 1, to and including current month (G)		Purchased Coal (current month) (H)		Washed Coal (current month) (I)		Stripped Coal (current month) (J)	
Tons	Cwt.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.

SALES

$	c.	$	c.	$	c.	$	c.	$	c.

COAL INVENTORIES

ITEM	(K)		(L)	
	$	c.	Tons	Cwt.
122 Inventory 1st of Month				
123 Inventory end of Month				
124 Increase				
125 Decrease				

PRODUCTION TONNAGE

ITEM	Current Mo. (M)		Accumulated (N)	
	Tons	Cwt.	Tons	Cwt.
126 Total sales (col. F, line 110)				
127 Purchased (col. H, line 110)				
128 Net (deduct line 127 fr. 126)				
129 Inv'y (add incr., deduct decr., line 124 or 125)				
130 Production				

MEMORANDA

(For use of the Federal Trade Commission only.)

EXAMINED		CORRESPONDENCE FORWARDED		
Initials	Memo. of Errors	Date	Ans. Req.	Subject

CORRESPONDENCE RECEIVED			
Sender	Date	Ans'd	By

FORM 5.—Federal Trade Commission coal report blank for 1918 (concluded).

Form C—8
F. T. C.

FEDERAL TRADE COMMISSION

File No.————

SEMIBITUMINOUS, BITUMINOUS OR SUBBITUMINOUS COAL OR LIGNITE

Report on Cost, Income and Tonnage for Month of——————1918

(Full name of reporting operator) (Address of principal office)

The information required by this report is ordered to be furnished pursuant to the power of the Commission under subdivision b of section 6 of "An Act to create a Federal Trade Commission, to define its powers and duties, and for other purposes," and under paragraph 12, section 25, of "An Act to provide further for the national security and defense by encouraging the production, conserving the supply and controlling the distribution of food and fuel," which is as follows:

"The books, correspondence, records, and papers in any way referring to transactions of any kind relating to the mining, production, sale, or distribution of all mine operators or other persons whose coal and coke have or may become subject to this section, and the books, correspondence, records, and papers of any person applying for the purchase of coal and coke from the United States shall at all times be subject to inspection by the said agency"

PENALTIES

Failure to mail this report within the time required will subject the corporation to a forfeiture of the sum of $100 for each and every day of the continuance of such failure Section 10, Federal Trade Commission Act

Any person who shall wilfully make or cause to be made any false entry or statement of fact in this report shall be subject to a fine of not less than $1000 nor more than $5,000, or imprisonment for a term of not more than three years or to both such fine and imprisonment Section 10, Federal Trade Commission Act

Line No.	Account No.	ACCOUNTS	Amount (current month)	per ton*	Amount Jan. 1 to and including current mo.	per ton†
1	151.	LABOR:				
2	a	Labor, mining $-------, washery $-------				
3	b	Superintendence and engineering				
4		TOTAL LABOR				
5	152.	SUPPLIES:				
6	a	Operating and repair supplies, mining $-------, washery $-------				
7	b	Power purchased				
8	c	Power house fuel, ------------ tons @ $----------				
9		TOTAL SUPPLIES				
10		TOTAL LABOR AND SUPPLIES (add lines 4 and 9)				
11	153.	DEBITS AND CREDITS TO COST: (credits in red)				
12	a	Profit or loss on miner's supplies				
13	b	Revenue from smithing				
14	c	Miscellaneous debits and credits				
15		TOTAL DEBITS AND CREDITS				
16		TOTAL OPERATING COST (take line 10 and add or deduct 15)				
17	154.	FIXED CHARGES AND GENERAL EXPENSES:				
18	a	Royalty, tons ----------				
19	b	Depletion, tons ------------ @ $----------				
20	c	Depreciation (exclude depreciation on delivery equipment)				
21	d	Taxes (except income and excess profits)				
22	e	Insurance—general				
23	f	Insurance—liability or workmen's compensation				
24	g	Officers' salaries and expenses				
25	h	Clerical salaries and office expenses				
26	i	Miscellaneous				
27		TOTAL FIXED CHARGES AND GENERAL EXPENSES				
28		TOTAL MINING COST (add lines 16 and 27)				
29	155.	SELLING AND DELIVERY EXPENSES:		per ton‡		per ton§
30	a	Commissions				
31	b	Uncollectible accounts				
32	c	Delivery expenses				
33		1. Labor				
34		2. Supplies				
35		3. Depreciation				
36	d	Other selling or delivery expenses				
37.		TOTAL SELLING AND DELIVERY EXPENSES				
38		TOTAL MINING AND SELLING COST (add lines 28 and 37)				
39		INCOME STATEMENT	$	c.	$	c.
40	156.	COAL SALES (columns F and G, line 78)				
41	157.	COST OF COAL SOLD:				
42	a	Purchased coal cost				
43	b	Coal inventory, add decrease, deduct increase (lines 81 or 82, col.I)				
44		Mining and selling cost (line 38)				
45		TOTAL COST OF COAL SOLD (add lines 42, 43 and 44)				
46		PROFIT FROM COAL (deduct line 45 from 40)				
47	158	MISCELLANEOUS INCOME: (Net)				
48	a	Dwellings				
49	b	Commissaries or stores				
50	c	Coke				
51	d	Miscellaneous				
52		TOTAL MISCELLANEOUS INCOME				
53		TOTAL INCOME (add lines 46 and 52) carried forward				

*Line 37 (K) is the divisor to be used to determine the rate per ton for lines 2 to 28 inclusive.
†Line 37 (L) is the divisor to be used to determine the rate per ton for lines 2 to 28 inclusive.

Name of Operator————

(For use of the Federal Trade Commission only)

Field———— Date———— File No.————

FORM 6.—Federal Trade Commission coal report blank for small companies in 1918.

			$ c.	$ c.
54		TOTAL INCOME (Brought forward)		
55	159.	DEDUCTIONS FROM INCOME:		
56	a	Taxes (income and excess profits)		
57	b	Interest		
58	c	Miscellaneous		
59		TOTAL DEDUCTIONS		
60		NET INCOME (deduct line 59 from 54)		

61	CHARGES TO FIXED ASSETS	
62	Surface Lands	
63	Coal	
64	Structures	
65	Equipment	
66	Development	

COAL TONNAGE (2,000 POUNDS)

Name or Size (A)	Description of Screen: Perforated or Bar	Size of Opening (inches): Over	Thru.	Power House Fuel (B) Tons	Cwt.	Coal washed (black) and Coal to coke ovens (red) * (C) Tons	Cwt.	Sales Tonnage (include purchased coal): Local (D) Tons	Cwt.	Other Than Local (E) Tons	Cwt.	Total for current month of ______ 1918 (add B.C.D.&E.) (F) Tons	Cwt.	Accumulated total of column (F) Jan. 1 to and including current mo. (G) Tons	Cwt.	Purchased Coal (current mo.) (H) Tons	Cwt.
67																	
68																	
69																	
70 Slack																	
71 Run of Mine																	
72 TOTAL																	

COAL SALES

	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
73							
74							
75							
76 Slack							
77 Run of Mine							
78 TOTAL							

COAL INVENTORIES

ITEM	(I) $	c.	(J) Tons	Cwt.
79 Inventory 1st of Month				
80 Inventory end of Month				
81 Increase				
82 Decrease				

PRODUCTION TONNAGE

ITEM	Current Mo. (K) Tons	Cwt.	Accumulated (L) Tons	Cwt.
83 Total Sales (col. F line 72)				
84 Purchased Coal (col. H line 72)				
85 Net (deduct line 84 from 83)				
86 Inv'y (add inc. deduct dec.)				
87 Production				

GENERAL INFORMATION

Number or Name of Mine	No. Days Wk'd	Cause of Idle days	Avg No. men employed per day worked: Miners	Day Men	Location of Mine: State	County	Dist. or Field	Kind of Coal †	Number or Name of Seam	Average Thickness of Seam (inches)

MEMORANDA (For use of the Federal Trade Commission only).

Examined: Initial	Memo. of Errors	Correspondence Forwarded: Date	Ans Req.	Subject

Correspondence Received: Sender	Date	Ans'd	By

REMARKS

Approved and Certified Correct:

____
(Name and title of officer)

* ______tons of coal yield one ton of coke.

† Semibituminous, cannel, splint, bituminous, subbituminous or lignite.

FORM 6.—Federal Trade Commission coal report blank for small companies in 1918 (reverse).

Form of Report Required by the Federal Trade Commission in 1920.—This is the form the requiring of which was enjoined by the Supreme Court of the District of Columbia.

Form C-51 F. T. C.

State————Field————File No.————
(DO NOT USE. For F. T. C. only.)

FEDERAL TRADE COMMISSION

REPORT ON

COST, INCOME, AND TONNAGE

OF

SEMIBITUMINOUS, BITUMINOUS, OR

SUBBITUMINOUS COAL OR LIGNITE

————————————————
(Full name of reporting operator)

————————————————
(Address of principal office)

————, 19—
(Month)

FORM 7.—Form of Report required by the Federal Trade Commission in 1920

NOTICE

Attention is directed to the following extract from "An Act to Create a Federal Trade Commission, to define its powers and duties, and for other purposes," approved September 26, 1914:

"That the Commission shall also have power . . ."

"Section 6 (b), To require, by general or special orders, corporations engaged in commerce, excepting banks, and common carriers subject to the act to regulate commerce, or any class of them, or any of them, respectively, to file with the Commission in such form as the Commission may prescribe annual or special, or both annual and special, reports or answers in writing to specific questions, furnishing to the Commission such information as it may require as to the organization, business, conduct, practices, management and relation to other corporations, partnerships, and individuals of the respective corporations filing such reports or answers in writing. . . ."

"Section 10. . . . Any person who shall wilfully make, or cause to be made, any false entry or statement of fact in any report required to be made under this Act, or who shall wilfully make, or cause to be made, any false entry in any account, record, or memorandum kept by any corporation subject to this act, or who shall wilfully neglect or fail to make, or to cause to be made, full true, and correct entries in such accounts, records, or memoranda of all facts and transactions appertaining to the business of such corporations, or who shall wilfully remove out of the jurisdiction of the United States, or wilfully mutilate, alter, or by any other means falsify any documentary evidence of such corporation, or who shall wilfully refuse to submit to the Commission or to any of its authorized agents, for the purpose of inspection and taking copies, any documentary evidence of such corporation in his possession or within his control, shall be deemed guilty of an offense against the United States and shall be subject, upon conviction in any court of the United States of competent jurisdiction, to a fine of not less than $1,000 nor more than $5,000, or to imprisonment for a term of not more than 3 years, or to both such fine and imprisonment.

"If any corporation required by this act to file any annual or special report shall fail so to do within the time fixed by the Commission for filing the same, and such failure shall continue for 30 days after notice of such default, the corporation shall forfeit to the United States the sum of $100 for each and every day of the continuance of such failure. . . ."

CERTIFICATION

Cost, income, and tonnage report of ——————————————
(Name of operator)

for the month of ——————, 19—.

Approved and certified correct:

To be signed by reporting operator. ——————————————
(Name and title of officer)

Date ——————, 19—.

FORM 7.—Form of Report required by the Federal Trade Commission in 1920—Continued

_________________________ File No.——

(Full name of reporting operator)

_________________________ Month of————, 19—

(Address of principal office)

1

Line No.	ACCOUNTS	AMOUNT			DO NOT USE (For F. T. C. Only)		
		$ ***	***	¢ ***	***	***	***
1	LABOR:						
2	Pick Mining .... tons						
3	Machine Mining ...... tons						
4	Other Operating Labor........						
5	Maintenance and Repairs......						
6	Mine Office (Clerks)..........						
7	Superintendence, $.. Engineering, $..						
8	....						
9	TOTAL LABOR						
10	SUPPLIES (Exclude power-house fuel):	***	***	***	***	***	***
11	Operating Supplies						
12	Power Purchased						
13	Maintenance and Repairs						
14	....						
15	TOTAL SUPPLIES						
16	Total Operating Cost (Add Lines 9 & 15)						
17	NET DEBITS (in Black) & CREDITS (in Red):	***	***	***	***	***	***
18	Supplies sold and Miscellaneous Revenue						
19	NET OPERATING COST (Take line 16 and add or deduct line 18)						
20	FIXED CHARGES AND GENERAL EXPENSES:	***	***	***	***	***	***
21	Royalty....tons @ $.. per ton						
22	Depletion...tons @ $.. per ton						
23	Amortization						
	(a) Development @ $.. per ton.........						
	(b) Stripping @ $.. per ton.						
24	Depreciation						

FORM 7.—Form of Report required by the Federal Trade Commission in 1920—Continued

File No.——

———————————
(Full name of reporting operator)

———————————
(Address of principal office)

Month of————, 19—

2

Line No.	ACCOUNTS	AMOUNT			DO NOT USE (For F. T. C. Only)		
		$		¢			
25	FIXED CHARGES AND GENERAL EXPENSES (Cont'd)	***	***	***	***	***	***
26	Officers' Salaries						
27	Officers' Expense						
28	Office and Clerical Salaries ...						
29	General Office Expenses						
30	Taxes (Except income and excess profits)						
31	Insurance—General						
32	Insurance—Liability or Compensation						
33	....						
34	TOTAL FIXED CHARGES & GENERAL EXPENSES.						
35	TOTAL MINING COST..... ......(Add lines 19 and 34)						
36	SELLING COST:	***	***	***	***	***	***
37	Officers' Salaries, $.. Expenses, $..						
38	Salesmen's Salaries and Expenses						
39	Commissions						
40	General Sales Office Expenses..						
41	TOTAL SELLING COST						
42	TOTAL MINING & SELLING COST (Add lines 35 and 41)						
43	INCOME STATEMENT						
44	COAL SALES AND TRANSFERS:	$ ***	***	¢ ***	***	***	***
45	Commercial Sales (line 75, column D)						
46	Departmental Transfers (line 75, column E)						
47	Purchased Coal Sales (line 75, columns F and G)						
48	TOTAL SALES AND TRANSFERS						

FORM 7.—Form of Report required by the Federal Trade Commission in 1920—Continued

File No.——

(Full name of reporting operator)

Month of————, 19—

(Address of principal office)

3

Line No.	ACCOUNTS	AMOUNT $	¢	DO NOT USE (For F. T. C. Only)		
		* * *	* * *	* * *	* * *	* * *
49	COST OF COAL SOLD:					
50	Mining and Selling Cost (line 42)					
51	Coal Inventory, deduct increase, add decrease (value shown on line 89)					
52	Purchased Coal Cost					
53	TOTAL COST OF COAL SOLD					
54	PROFIT FROM COAL (Subtract line 53 from line 48)					
		* * *	* * *	* * *	* * *	* * *
55	MISCELLANEOUS INCOME:					
56	Net Receipts from Coke Sales..					
57	Royalty from Owned or Leased Lands					
58	Interest and Dividends					
59	....					
60	TOTAL MISCELLANEOUS INCOME					
61	TOTAL INCOME (Add lines 54 and 60)					
		* * *	* * *	* * *	* * *	* * *
62	DEDUCTIONS FROM INCOME:					
63	Taxes, Income and Excess Profits					
64	Interest					
65	....					
66	TOTAL DEDUCTIONS FROM INCOME					
67	NET INCOME (Subtract line 66 from line 61)					

REMARKS (For use of reporting operator)	MEMORANDUM (For use of F. T. C. only)		

FORM 7.—Form of Report required by the Federal Trade Commission in 1920—Continued

____
(Full name of reporting operator)

____
(Address of principal office)

File No. ______

Month of ____________, 19—

4

Line No.	GRADE OF COAL	SALES OF PRODUCED COAL (Exclude purchased coal) (A) Local sales and coal to miners (Tons)	(B) Sales to railroads (Tons)	(C) Sales to other Consumers (Tons)	(D) Total Commercial sales (Add A, B, & C) (Tons)	DEPARTMENTAL Transfers (E) Coal to coke ovens, own railroads, etc. (Tons) *	PURCHASED COAL ONLY (F) Sales to railroads (Tons)	(G) Sales to other Consumers (Tons)
	COAL TONNAGE (Net tons of 2,000 pounds. Do not report fractions of tons.)							
68	Prepared							
69	Run of Mine							
70	Slack							
71	Total							
	COAL SALES							
		$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢	$ ¢
72	Prepared							
73	Run of Mine							
74	Slack							
75	Total							

* Do not include power-house fuel.

FORM 7.—Form of Report required by the Federal Trade Commission in 1920—Continued

GENERAL INFORMATION

Number or name of mine	Number days Worked	Average Number of men employed per day worked		Total Number of men on pay roll during month		Location of mine		Number or name of seam	Average thickness of seam (inches)
		Miners	Day Men	Miners	Day Men	County	State		
76									
77									
78									
79									
80									
81									
82									

FORM 7.—Form of Report required by the Federal Trade Commission in 1920—Continued

(Full name of reporting operator)

(Address of principal office)

File No. ———

Month of —————, 19—

COAL TONNAGE STATEMENT (exclude purchased coal)

5

(All tonnage should be reported in net tons of 2,000 pounds. Do not report fractions of tons.)

Line No.	Tons		Tons	
83 Total Sales (line 71, column D)			x x x	x x x
84 Departmental Transfers (line 71, column E)			x x x	x x x
85 Coal in transit not invoiced			x x x	x x x
86 Total sales, transfers and coal in transit not invoiced	x x x	x x x		
87 Coal stored at beginning of period.... (Value, $....)			x x x	x x x
88 Coal stored at end of period.... (Value, $....)			x x x	x x x
89 Increase (add) or decrease (deduct) (Value, $....)	x x x	x x x		
90 NET PRODUCTION OF COAL DIVISOR (take line 89 and add to or deduct from line 86)	x x x	x x x		
91 Production tonnage (tipple weights)	x x x	x x x		
92 Power-house fuel			x x x	x x x
93 Slate and other waste in preparation			x x x	x x x
94 Total coal and waste not realized on	x x x	x x x		
95 NET PRODUCTION OF COAL (Subtract line 94 from line 91)	x x x	x x x		

FORM 7.—Form of Report required by the Federal Trade Commission in 1920—Continued

BALANCE SHEET AS AT————, 19—

(Full name of reporting operator)

File No. ——

(Address of principal office)

6

Line No.	ASSETS	DETAIL			TOTAL			DO NOT USE for F. T. C. only		
		$		¢	$		¢			
101	Cash in bank and on hand				x x	x x	x x			
102	Accounts receivable-Current ...				x x	x x	x x			
103	Notes receivable-Current				x x	x x	x x			
104	Inventories (a)				x x	x x	x x			
105	" (b)				x x	x x	x x			
106	Sub-total of current assets				x x	x x	x x			
107	Less Reserve for doubtful accounts				x x	x x	x x			
108	TOTAL CURRENT ASSETS ...	x x	x x x	x						
109	Insurance paid in advance				x x	x x	x x			
110	Taxes paid in advance				x x	x x	x x			
111	Royalties paid in advance				x x	x x	x x			
112	Stripping done in advance				x x	x x	x x			
113	....				x x	x x	x x			
114	TOTAL DEFERRED ASSETS..	x x	x x x	x						

115 Intercompany (affiliated) accounts, notes & loans receivable				x x	x x	x x			
116 Stock of other companies				x x	x x	x x			
117 Bonds of other companies				x x	x x	x x			
118 Mortgages				x x	x x	x x			
119 Real Estate not used in coal production				x x	x x	x x			
120				x x	x x	x x			
121 TOTAL INVESTMENTS	x x	x x x	x						
122 Coal lands				x x	x x	x x			
123 Surface lands				x x	x x	x x			
124 Buildings				x x	x x	x x			
125 Machinery and equipment				x x	x x	x x			
126 Development charges				x x	x x	x x			
127 Office furniture and fixtures ...				x x	x x	x x			
128 Sub-total of fixed assets				x x	x x	x x			
129 Less reserves for depletion $.... and depreciation $..........				x x	x x	x x			
130 TOTAL FIXED ASSETS	x x	x x x	x						
131 Good Will	x x	x x x	x						
132 Leaseholds	x x	x x x	x						
133 Property rights	x x	x x x	x						
134 TOTAL ASSETS	x x	x x x	x						

FORM 7.—Form of Report required by the Federal Trade Commission in 1920—Continued

BALANCE SHEET AS AT——————, 19—

File No. ——

(Full name of reporting operator)

(Address of principal office)

7

Line No.	LIABILITIES	DETAIL			TOTAL			DO NOT USE for F. T. C. only		
		$		¢	$		¢			
135	Trade accounts payable				x x	x x	x x			
136	Trade notes payable				x x	x x	x x			
137	Wages accrued				x x	x x	x x			
138	....				x x	x x	x x			
139	....				x x	x x	x x			
140	....				x x	x x	x x			
141	TOTAL CURRENT LIABILITIES	x x	x x x	x						
142	Taxes				x x	x x	x x			
143	Interest				x x	x x	x x			
144	Unclaimed wages				x x	x x	x x			
145	....				x x	x x	x x			
146	TOTAL ACCRUED LIABILITIES	x x	x x x	x						

147 Intercompany (affiliated) Accounts, notes & loans payable	x x	x x x	x						
148 Capital, stock-preferred. . shares. .	x x	x x x	x						
149 Capital, stock-common—shares. .	x x	x x x	x						
150 Bonds. . . . %	x x	x x x	x						
151 Mortgages. . . . %	x x	x x x	x						
152 Loans & notes payable, bank or open accounts	x x	x x x	x						
153	x x	x x x	x						
154 Appropriated surplus	x x	x x x	x						
155 Dividends declared, not paid. . . .	x x	x x x	x						
156	x x	x x x	x						
157 Surplus	x x	x x x	x						
158	x x	x x x	x						
159	x x	x x x	x						
160	x x	x x x	x						
161	x x	x x x	x						
162	x x	x x x	x						
163 TOTAL LIABILITIES	x x	x x x	x						

Balance sheet certified correct and in accordance with the books.

(Name) (Title of officer)

FORM 7.—Form of Report required by the Federal Trade Commission in 1920—Concluded

REPORT ON

BITUMINOUS COAL PRODUCTION, COST AND INCOME

OF

....

FOR...19..........

Account No.	COST	Amount	Per Ton
1	MINING COST		
2	LABOR		
3	Mining....................................		
4	Yardage and Dead Work..........................		
5	Day Work....................................		
6	Power Plant Labor..............................		
7	Mine Office and Superintendence................		
8	....		
9	Total Labor..................................		
10	OTHER CHARGES AT MINE		
11	Supplies and Expenses........................		
12	Power Plant Fuel—Tons.............. Price $..........		
13	Power Plant Supplies..........................		
14	Electric Current Purchased....................		
15	....		
16	Loss or Gain on Explosives and Smithing (Gain in Red)...........		
17	Total Other Charges at Mine..............		
18	COST AT MINE		
19	OVERHEAD		
20	Royalty......................................		
21	Depletion....................................		
22	Depreciation..................................		
23	Contingent Reserve............................		
24	Taxes (Other than Income and Excess Profit)....................		
25	Insurance (General)............................		
26	Insurance (Liability or Workmen's Compensation).............		
27	Officers' Salaries and Expenses....................(........%)		
28	Other General Office Salaries and Expenses..........(........%)		
29	General Expense..............................		
30	....		
31	Total Overhead..............................		
32	Total Mining Cost (Divisor—Tons of Production—Account No. 107)		
33	SELLING COST		
34	Commissions..................................		
35	Advertising..................................		
36	Bad Accounts..................................		
37	Salaries and Expenses of Salesmen and Sales Agencies............		
38	Officers' Salaries and Expenses....................(........%)		
39	Other General Office Salaries and Expenses..........(........%)		
40	....		
41	....		
42	....		
43	Less Selling Cost applicable to Items charged against Miscellaneous Income (Accounts 33 to 86, inclusive)..........................		
44	Total Selling Cost (Divisor—Total Production Sales—Acct. No. 67)		
45	Total Cost per Ton..............................	* * * * * *	
46	DEDUCTIONS FROM INCOME		
47	Taxes—Income and Excess Profit..................		
48	Interest (Paid and Accrued)......................		
49	....		
50	Total..................................		
51	CAPITAL CHARGES		
52	Improvements............................ $..................		
53	Developments............................		
54	....		
55	Total..		

FORM 8.—Form prepared by Cost Accounting Committee of National Coal Association for submission to Federal Trade Commission.

REPORT ON

BITUMINOUS COAL PRODUCTION, COST AND INCOME

OF

....

FOR...19..........

Account No.	INCOME	Tons of 2000 Lbs.	Per Ton	Amount
56	COAL SALES (Exclusive of Purchased Bituminous and Anthracite)..........			
57	To Railroads:—			
58	At Tipple..........................			
59	Shipped..........................			
60	Other Shipments:—			
61	Via Rail..........................			
62	Via Water..........................			
63	Coal Coked (including Coal Washed)..........			
64	Local Sales—Retail Sales at Mines—(Net Returns)..			
65	Power House Fuel..........................			
66	....			
67	Total Production Sales..........................			
68	Cost of Sales:			
69	Total Mining Cost (Account No. 32)..........		*	
70	Inventory First of Month..........................		*	
71	Total..........................		*	
72	Inventory Last of Month..........................		*	
73	Total Cost of Sales..........................			
74	Gross Profit on Coal Sold..........................	*		
75	Deduct Selling Cost (Account No. 44)..........	*		
76	Income from Sales..........................	*		
77	Miscellaneous Income (Net):			
78	Heat, Light and Power..........................			
79	Dwellings and Farms..........................			
80	Stores, Miners' Supplies, Commissaries, etc..........			
81	Standard Gauge Railroad Equipment..........			
82	Water Transportation Equipment..........			
83	Coke and By-Products..........Tons..........			
84	Washed Coal..........Tons..........			
85	Purchased Anthracite..........Tons..........			
86	Purchased Bituminous..........Tons..........			
87	Other Income (Particularize)..........			
88	....			
89	Total Miscellaneous Income..........................			
90	Total Income (Sales and Miscellaneous)..........			
91	Less Deductions from Income..........................			
92	Net Income..........................			

PRODUCTION TONNAGE (2000 Pounds)

		Prepared	Run-of-Mine	Slack	Total
93	SALES:				
94	To Railroads:—				
95	At Tipple..........................				
96	Shipped..........................				
97	Other Shipments:—				
98	Via Rail..........................				
99	Via Water..........................				
100	Coal Coked (incl'g Coal Washed)..				
101	Local Sales..........................				
102	Power House Fuel..........................				
103	Total Sales..........................				
104	Add—Inventory End of Month...				
105	Total..........................				
106	Deduct—Inventory First of Month				
107	PRODUCTION..........................				

FORM 8.—Form prepared by Cost Accounting Committee of National Coal Association for submission to Federal Trade Commission (reverse).

In the fall of 1917 the National Coal Association appointed a Committee of competent accountants charged with the duty of devising cost report forms which would give the government the information required for the purpose of a study of costs in connection with the price fixing powers of the Fuel Administration and, at the same time, show true costs in a manner which would not work a hardship upon the industry. This Committee, after mature consideration, prepared a tentative short form of report which, in their opinion, would meet the requirements and submitted it to the Federal Trade Commission, where it received scant consideration.

In the winter of 1918 a second committee was appointed for further consideration of this matter. This committee gave considerable time to its study, and at the annual convention of the National Coal Association in May, 1919, submitted a tentative report which was later completed and adopted by the Directors of the National Coal Association as a standard for the industry. This form has been very widely distributed among bituminous coal operators throughout the country and has been adopted by a large number of them.

During the period when the Federal Trade Commission was not collecting cost data, namely, the year 1919, the forms were submitted to the economists and accountants in charge of the Coal Section of the Federal Trade Commission with the advice that if the system recommended obtained their approval the endorsement of the entire coal mining industry might be secured. This approval was not forthcoming and as has been heretofore shown, the Commission issued a new form of cost sheet for use on January 1st, 1920. It will thus be seen that the interest of the government in coal costs has been at times beneficial and at times harmful. Without doubt the impetus given to the study of coal costs by the Commission was in the first instance helpful because probably only through necessity could the industry have been brought so quickly to the study of costs and their compilation in a uniform manner. On the other hand, the unsettled policy of the Commission and the frequent changes of forms wore out the patience of coal producers and made them loath to adopt any uniform system of cost determination until the courts should finally pass upon the right of the Federal Trade Commission to direct their accounting methods. Each of the forms prepared by the Commission required some adjustment in the classification of accounts by coal operators, and the 1920 report in particular required the ascertainment of some portions of cost in a manner which is not entirely in harmony with the opinions contained in the regulations of the Internal Revenue Bureau.

The form recommended by the National Coal Association's Cost Accounting Committee will be made the basis of the treatment of costs in the articles in this book.

Instructions for Compiling Reports.—The following instructions for compiling reports are taken from the Report and Suggestions of Committee on Standard System of Accounting and Analysis of Cost of Production of the National Coal Association.[1]

MINING.

(1) Hand Mining.

Miners, Helpers, Shot Firers, etc.

(2) Machine Mining.

In machine mines this item should be subdivided into UNDERCUTTING AND PIT CAR LOADING.

UNDERCUTTING should be charged with—

(a) Generation and Transmission of Power, i. e., the proportionate share of Cost of power generated and its transmission to machines (see Note on Power below).

(b) Maintenance of Machines, i. e., repair parts, machine picks,

[1] Any one desiring to make a study of coal cost accounting should ask the secretary of the National Coal Association, Commercial Bank Building, Washington, D. C., for a copy of this report.

Sheet 1

____
(Name of Company)

______________________19__

Report of Cost, Income and Tonnage

For Month of______________

COST

Line No.	ACCOUNT	CURRENT MONTH						YEAR TO DATE					
		LABOR		SUPPLIES		TOTAL		LABOR		SUPPLIES		TOTAL	
		Amount	Per Ton	Amount	Per Ton	Amount	Per Ton	Amount	Per Ton	Amount	Per Ton	Amount	Per Ton
	Mine												
1	Operating Expenses..........												
2	Mining												
3	Timbering												
4	Deadwork												
5	Track Laying..................												
6	Drainage												
7	Ventilation												
8	Haulage and Hoisting.........												
9	Dumping and Tallying........												
10	Preparation												
11	Railroad Car Loading and Yard Expense												
12	Power												
13	Repairs to Buildings and Permanent Structures........												
14	Mine Office....................												
15	Superintendence												
16	Engineering												
17	Sundries												
18	....												
19	Total..........................												
20	Additions or deductions account of sale of explosives, etc.....												
21	Total Mine Operating Expense												
22	Other Operating Charges......												
23	Royalty												
24	Depletion												
25	Depreciation												
26	Insurance—General												
27	Insurance—Liability or Compensation												
28	Taxes (exclude Income and War Profits)												
29	....												
30	....												
31	Total Other Operating Charges												
32	Total Operating (add lines 21 and 31)................												

FORM 9.—National Coal Association coal cost report blank.

Sheet 3

____
For Name of Company

Report of Cost, Income and Tonnage

For Month of________________

COST

Line No.	ACCOUNT	CURRENT MONTH				YEAR TO DATE	
		LABOR	SUPPLIES	TOTAL		TOTAL	
		Amount	Amount	Amount	Per Ton	Amount	Per Ton
33	General Expense..............						
34	Officers' Salaries and Expenses..						
35	Other Salaries................						
36	Rent and Miscellaneous Office Expense						
37	Legal Expense................						
38	....						
39	....						
40	....						
41	Total General Expense.......						
42	Total Operating and General Expense (add lines 32 and 41)						
43	Selling Expense..............						
44	Officers' Salaries and Expenses..						
45	Salesmen's Salaries and Expenses						
46	Other Office Salaries...........						
47	Rent and Other Office Expense..						
48	Advertising						
49	Commissions						
50	Miscellaneous.................						
51	....						
52	....						
53							
54	Total Selling Expense........						
55	Total Operating, General and Selling Expense (add 42 & 53)						
	....						
	....						
	....						

FORM 9.—National Coal Association coal cost report blank (continued).

Sheet 8

For Name of Company

Report of Cost, Income and Tonnage

For Month of ____________

INCOME

Line No.		Tons		Current Month		Year to Date	
		Current Mo.	Year to Date.	Amount	Per Ton	Amount	Per Ton
56	Coal Sales						
57	Sales Per Railroad Weights						
58	Delivered to Locomotives						
59	Local Sales at Mines						
60	Coal Coked						
61	Raw Coal to Washery						
62	To Power Plant						
63	To Dwellings						
64	Adjustment of Inventories (Plus or minus)						
65	Gross Sales (produced coal)						
66	Deductions						
67	Less Freight Prepaid						
68	Less Allowances and Adjustments						
69							
70							
71	Total Deductions						
72	Net for Coal at Mine						
73	Less Total Operating Charges (Line 55)						
74	Margin on Coal						
75	Other Income						
76	Profit or Loss, Explosives } See optional deduction from operating expenses line 20						
77	Smithing } See optional deduction from operating expenses line 20						
78	Heat, Light and Power						
79	Dwellings and Farms						
80	Stores						
81	Profit or Loss, Washer Operations						
82	Profit or Loss, Coke Plant						
83	Floating Equipment						
84	Railroad Euipment						
85	Purchased Coal						
86							
87							
88	Total Miscellaneous Income						
89	Gross Income. (Add lines 74 and 88)						
90	Charges to Income Deductible for Federal Taxes						
91	Interest (Paid or accrued)						
92	Charges to Income Not Deductible for Federal Taxes						
93	Income and Excess Profits Taxes						
94	Contingent Reserve (Mining hazard)						
95	Maintenance Reserve						
96							
97							
98	Total Charges to Income						
99	Net Income (Subtract 98 from 89)						
100	Taxable Net Income (Subtract 91 from 89)						

FORM 9.—National Coal Association coal cost report blank (continued).

Sheet 4

For Name of Company

Report of Cost, Income and Tonnage For Month of ____________

Tonnage Statement—Net Tons of 2000 Pounds

(Report part tons as decimals)

CURRENT MONTH

Line No.	Disposition Made of Coal	Prepared	Mine Run	Screenings	Total
101	Invoiced to Customers—				
102	Sales per Railroad Weights..........				
103	Delivered to Locomotives............				
104	Local Sales at Mines................				
105	Departmental Transfers—				
106	Coal Coked..........................				
107	Raw Coal to Washery.................				
108	To Power Plant......................				
109	To Dwellings				
110	Sub-total...........................				
111	Add Estimated Inventory—Coal on Hand and Rolling Last of this Month......				
113	Total.........................				
114	Deduct Estimated Inventory—Coal on Hand and Rolling First of Month....				
116	Total Production (Divisor for Cost)..				

THIS YEAR TO DATE

Line No.	Disposition Made of Coal	Prepared	Mine Run	Screenings	Total
101	Invoiced to Customers—				
102	Sales per Railroad Weights..........				
103	Delivered to Locomotives............				
104	Local Sales at Mines................				
105	Departmental Transfers—				
106	Coal Coked..........................				
107	Raw Coal to Washery.................				
108	To Power Plant......................				
109	To Dwellings				
110	Sub-total...........................				
111	Add Estimated Inventory—Coal on Hand and Rolling Last of this Month......				
113	Total.........................				
114	Deduct Estimated Inventory—Coal on Hand and Rolling First of Month....				
116	Total Production (Divisor for Cost)..				

FORM 9.—National Coal Association coal cost report blank (continued).

SHORT FORM

....COAL COMPANY

INCOME STATEMENT, Month of.., 1919.

Tons of Coal Produced, realizing net at mine................									
General Expense Administration expense..................................									
Selling Expense All expenses of sales department									
Mine Operating Expense (a) Wages and compensation of all employees in and about the mine									
(b) Material and supplies— All material and supplies consumed in and about the mine..									
Employer's Liability Premiums on policies if insurance is carried, or such provision as may be made therefor, if no insurance is carried.									
Fire, Boiler and Tornado Insurance Premiums on policies, or provision if self-insured.......									
Depreciation and Depletion A definite provision, preferably a fixed charge per ton to redeem capital..									
Taxes Proper provision for Federal, State and Local Taxes...									
Interest Interest accrued on outstanding interest-bearing obligations or other interest paid during the period covered by the cost sheet.									
Total....									
Margin on Coal..........................									
Other Income..									
Total Income for Month.................									
Contingent Reserve									
Net Income for Month									

FORM 9.—National Coal Association coal cost report blank (concluded).

cable for electric machine, and air hose for air machines. Shop and repair men employed on machines and labor of blacksmiths sharpening or making bits and such part of the time of head electrician spent in maintenance of machines.

(c) Operating Machines: To this subdivision should be charged the wages of Machine Runners and Helpers, Bit Carriers, oil, grease and waste, oil cans, hand picks, pick handles, jacks, machine shovels, etc., etc. If machines are not equipped with self-propelling trucks and the machines are moved about their territory by mule haulage, such haulage should be charged to operating machines.

PIT CAR LOADING needs no comment.

TIMBERING.

Though Timbering is imposed by physical conditions and is closely incident to work at the face, it is a significant item, and should stand by itself. To this subdivision should be distributed wages of timbermen and helpers, the cost of props, cap pieces, cross bars and other timber used in advancing work, such cost including freight and the cost of unloading and handling at the mine, with the expense of preparing and delivering to the working face.

DEADWORK.

As every mine presents physical conditions peculiar to itself, no two mines being alike, and as the physical conditions fluctuate as the work progresses, in order to work out comparable statements and records, Deadwork should be classified in accordance with its nature, such as yardage, premium for narrow work, shooting rock, lifting bottom, taking down top, stowing and dumping gob, cleaning up falls and retimbering after them, handling squeezes, mine fires, or any other work imposed by adverse physical conditions.

TRACKLAYING.

While track is immediately connected with and necessary for the transportation of coal to the shaft bottom, and hence a necessary item incident to Haulage, it has long been regarded as a significant item in the cost sheet, and should stand by itself.

To this account should be charged rails, ties, spikes and fastenings, and the labor of grading roads and tracklaying in advancing work. Repairs to track should be charged to Haulage and Hoisting under Maintenance of Way.

Purchases of track material should be charged to Track Material Account, and as the material is taken into the mine it should be credited and charged Tracklaying.

DRAINAGE.

To this subdivision should be charged the cost of labor employed in connection with the ordinary removal of water from the workings of the mine, with the expense of repairs and maintenance of pumps, pipe lines, drains; also the proper proportion of power used. In some regions and in deep mines the tonnage of water handled and consequent consumption of power is very heavy.

In the event of a flood or extraordinary inflow of water, the expense of recovering the mine or flooded workings should be shown as a special and separate charge to Operating Account.

VENTILATION.

To ventilation should be charged proper proportion of Power Expense to represent power used in driving fans. If cross-cuts are driven narrow because of physical conditions, the yardage should be charged under Deadwork.

Labor and material used in closing cross-cuts, constructing overcasts, mine doors, curtains and brattice, should be charged to Ventilation; also expense of cleaning and repairing air courses. Repairs and lubrication of fan and fan engine, pressure gauges, etc., etc., should be charged to Ventilation.

While trappers are rendered necessary in connection with ventilation doors, their work is incident to haulage of coal, and their wages should be charged to Hauling and Hoisting under Conducting Transportation.

HAULAGE AND HOISTING should be separated into—

1. **Generation and Transmission of Power.**

   The proportion of expense of generating power (as set forth in note) and the construction and keeping up of transmission lines and haulage circuits.

2. **Care and Maintenance of Equipment.**

   (a) Hoisting and haulage engine repair parts, lubricants, packing and waste, and wages of hoisting engineer and mechanics employed in care and repair. Hoisting and haulage ropes, cage repairs, and replacements; safety devices, guides and sheaves.

   (b) Care and maintenance of motors.

   When motor haulage is used, repair parts and labor of care and repair.

   (c) Care and maintenance of pit cars.

   Labor and material used in keeping pit cars in repair. New cars replacing wrecked or worn-out cars, also additional cars necessary to maintain output by reason of increasing length of haul after mine has reached its contemplated output capacity.

(d) Care and maintenance of live stock.
Harness and stable supplies.
Grain and hay, and wages of stablemen and veterinary, clipping and shoeing, etc. New mules replacing killed or worn-out mules should be charged to maintenance of live stock.

3. Conducting Transportation.

Drivers, Boss Drivers, Motormen, Trip Riders, Couplers, Cagers and Pushers, Oilers (oil and grease), Trappers and Switch Throwers, Jackmen, and that part of Hoisting Engineer's wages not charged to Maintenance and Repairs.

4. Maintenance of Way.

Repairs to roads, cleaning roads, relaying track, new ties, rollers for rope haulage, etc., etc.

DUMPING AND TALLYING.

Top Cagers, Pushers and Dumpers, Weigh Boss, Check Puller and Track Weighman.

PREPARATION.

The proportion of power used in operating screens, crushers, elevators, conveyors, picking tables, spiralizers, loading booms, etc., and the cost of the labor of attendants thereon, such as Inspectors, Dock Bosses, Sulphur and Slate Pickers, and the labor of disposing of waste, all material and labor involved in the maintenance of repairs and replacements of such apparatus as are used in the preparation of coal.

If a Washer is operated, such investment and its operation should stand by itself. The Washer should be charged with the expense of operation, repairs, maintenance, insurance and its proper depreciation, with the value of the raw coal passed through it, either at cost of production, or, preferably, at the market value obtainable for raw coal, and credited with the out-turn of washed product.

If the result is a credit balance, it should be taken into operating income as net income from Washer; if it results in a debit balance, it should be deducted from operating income as loss on Washer operations.

RAILROAD CAR LOADING AND YARD EXPENSE.

To this subdivision should be charged: Wages of Yard Boss, Car Cleaners, Trimmers, Car Riders, Car Haulers, Brakemen, and all material and supplies used by them.

The expense of maintaining and operating mine tracks, if a switch engine is employed, or if switching is done by the railroad for which a special charge is made, distinct from the freight rate, the expense thereof should be charged to this subdivision.

POWER.

The generation and transmission of power is about the only expense about a coal mine that is not in total directly chargeable to some one subdivision of operating work. To generation and transmission of power should be charged the wages of Firemen, Fuel Men, Ash Haulers, Water Men, Pump Men, Generator and Compressor Attendants, and such part of Hoisting Engineer's and Electrician's time, or other labor and material, as may be employed in the care, repair and maintenance of boilers, pumps, engines, generators, air compressors or other power-generating machinery; wire and pipe used in transmission lines, cost of water supply and all coal consumed. If an unmerchantable product is used under the boilers, it should be charged at its cost of production. If cost of fuel is not included in cost of power, the accounts do not exhibit true cost. The true cost should be before the operator to induce him to estimate the possibilities of effecting savings by improving his plant or boiler room practice; also to estimate the possibility of effecting economy by purchasing power of outside service companies, or through establishing central power plants. The tonnage consumed per annum under own boilers by large producers is very large, and the cost thereof should be clearly shown.

If outside power is purchased, it should be charged to Power.

The expense of power should then be distributed to the different subdivisions of Operating Expense, in accordance with the proportion of power employed in each section of the work.

Mining, under the subdivision Undercutting, should be charged with the proportion of power applied to machine operation.

Haulage and Hoisting should be charged under Generation and Transmission of Power, with its proportion of power-house expense, as represents the power used by hoisting engines and haulage engines and motors.

Under the subdivision Preparation should be charged the power used for shaker screens, picking tables, etc., etc.

Ventilation should be charged with the share of expense of power house, in accordance with the power used for driving fans.

Drainage, with the proper proportion of power used in pumping water from the mine.

The above suggestion that the expense of power should be distributed to the various subdivisions of the work may appear difficult to the accountant, and in small operations such distribution may be a needless refinement; and in such cases power may well be shown as an undistributed item of operating expense.

However, in large operations, the cost of power is a large item, and the making up of a heat and steam balance will not be difficult to the well-informed engineer or electrician.

The measurement of fuel and water and steam generation, compared with the useful work being done, will prove fruitful in results. Such time and effort is well spent, as it leads up to the detection of steam line leakages, engine cylinders and valves in bad condition, insufficient power circuits, bad track bonding, etc., etc. The coal operator who wastes coal by overlooking preventable losses is like the merchant who consumes his own stock.

David Moffat Myers, in his very lucid and valuable book entitled "Preventing Losses in Factory Power Plants," well says: "Just as the expert accountant is able to analyze the expenditure of one hundred dollars in a business enterprise and to show where some of them are wasted or misspent, and finally to strike a true balance between income and expenditure, just as truly and with as great a degree of accuracy a trained engineer may analyze and balance the expenditure of energy from the original one hundred per cent income or input, to the final machine horsepower hours of useful work, and in so doing he may point out where certain portions of this energy are misspent or wasted, and how they may be saved and converted into useful work."

"There does not exist a power problem that is not capable of solution by the intelligent application of these principles of analysis."

REPAIRS TO BUILDINGS AND STRUCTURES.

To this item should be charged labor and material used in repairs of permanent buildings and structures of the surface mining plant.

SUNDRIES.

Small and unimportant items of expense not easily distributable to the above subdivisions of Expense.

CHAPTER II

THE MINE TONNAGE RECORD

The starting point of all operating activity is, of course, the mine and, as far as the accounting proposition is concerned, usually three persons there are directly or indirectly responsible for the correctness of the accounts. They are:

1—Weighmaster; 2—Mine Foreman; 3—Mine Clerk.

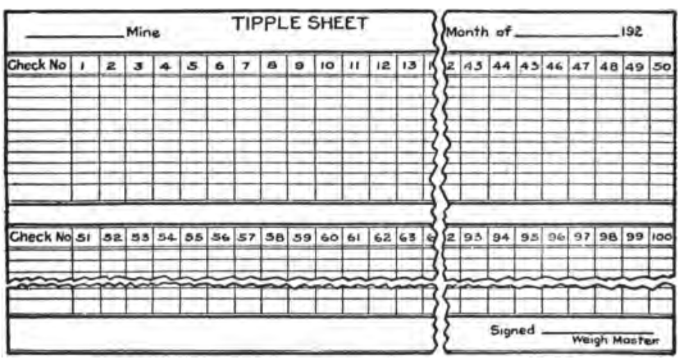
The ton being the unit of production in bituminous coal mining, we will first consider the work of mine weighmaster. It devolves upon him to properly weigh and record daily the coal produced. In certain fields there is a check upon the accuracy of his record due to the employment by the miners of a check-weighman, the total credits to each miner each day being compared by these two men, one the employee of the owner or operator, the other the employee of the men.

The weighmaster's records are properly the control account and must be so kept as to indicate the number of mine wagons produced each day by each miner, with the individual weights of each one, in the districts in which tonnage is the basis of payment. In districts where the mine wagon is the unit of payment, this record shows the number of such cars produced. Such records are usually made up in large size sheets 17 x 22 in. or 19 x 28 in., preferably on good stout paper adapted to pencil writing, showing in the proper columns the credit to each miner.

It is the custom in most mines to designate miners by numbers, they being given a set of brass or other metallic pit checks, one of which is placed on each car sent out of the mine, and from which the record of the person who produced the coal is obtained.

The Tipple Sheet.—Such a form, which we will for convenience call a tipple sheet, is reproduced in Form 10.

Since coal produced by mining pick and that produced by machine mining carry different rates of compensation it is necessary that in the totals of this sheet such a subdivision be made. This is most easily accomplished by assigning a certain series of check numbers to pick miners and another series of check numbers to machine miners or those loading after cutting machines. In the case of the latter other sub-divisions may well be made



FORM 10.—Tipple sheet blank.

to show the tons cut by each machine. The tons credited to the cutters will always equal the tons credited to loaders when both classes of men are paid upon the tonnage basis.

It is necessary that the weighmaster be informed by the mine foreman, or whoever employs the men, as to the nature of the work to be performed by the miners; that is, whether a new man is employed as a pick miner, as a cutter, or as a loader after machine. This is necessary because each of these occupations pays a different rate per ton.

If a man has been employed in pick work and is transferred to work of loading, immediate notice must be given to the weighmaster of such a change in occupation.

It is generally well that the miners' check numbers be assigned by the weighmaster. The best method of carrying this out is to have the mine foreman, or whoever employs the operative, inform the weighmaster, in writing, that John Doe has been employed on a certain date and request that he be assigned a number and given a set of checks, the mine foreman stating whether the work to be done is pick or machine mining. A suggested form for transmitting this information follows:

.... Mine .... 191....
To ....
Superintendent
.... Company
Dear Sir:
The Bearer, ..., Address ...., desires employment as .... at your mine.
....
..................................Title

Checks furnished ...., Amount charged ....
Mr. ...., Weighmaster
Dear Sir:
Please furnish him with a set of machine / pick / cutting checks, Rate for coal ....
....
Superintendent
Check number furnished ....
Where last employed ...., Nationality ....
Certificate No. ......, Age......, Height......, Weight......,
Complexion ...., Mining experience ....,
Married or single ...., Characteristics ....

FORM 11.—Miner's Employment Slip and Check Requisition.

This form, it will be noticed, can be used for the purpose of indicating the former experience and place of work of the man employed. The weighmaster should note on the form the serial number of the checks assigned to the miner and at the close of that day transmit the mine foreman's order attached to his tipple-sheet to the mine clerk that in connection with the entry of this man's name upon the payroll he also may have information as to the kind of work to which the new employee is assigned.

It may here be noted that in Illinois and possibly in some other States, the law requires that each miner so employed must have a certificate of competency, and for that reason the space is provided "Certificate No. . . . ."

In connection with the proper reporting of the tonnage produced by miners in order to avoid over-payments or under-payments because of different mining rates for pick and machine mined coal, when men are transferred from one class of mining to another, the mine foreman should notify the weighmaster of such a change in occupation. A very simple form, along somewhat the following lines, will answer:

. . . .
Weighmaster.

John Doe $\frac{\text{pick}}{\text{machine}}$ check No. . . . . . ., is transferred to $\frac{\text{pick}}{\text{machine}}$ mining. Please assign him another number.

. . . .
Mine Foreman.

Assigned check No. . . . . . .

. . . .
Weighmaster.

FORM 12.—Notice to Weighmaster of Change of Miner's Number.

This form, after having been noted by the weighmaster and his classification of the employee having been changed, should be attached to his tipple sheet and sent at the close of the day of receipt with the tipple sheet to the pay-roll office. It then becomes a notice to the mine clerk of the change in rate. Where pay-roll auditors are employed they should carefully check this notice covering change in rate to see that necessary changes in classification have been made.

In addition to weighing the coal, the weighmaster is usually charged with responsibility for showing what disposition was made of the product. He should show on his tipple sheet daily before turning it over to the payroll clerk all of the necessary data indicating the total pick, machine, "company," and no credit coal produced, how it was used, etc., something in the following manner:

Recapitulation
All Figures Cwts.

Pick	......	R. R. Cars	......
Machine	......	Mine Fuel	......
Company	......	R. R. Engines ...	......
No Check	......	Houses	......
....	......	No Check Credited	......
....	......	Wrecked Cars	......
Total	......	Total	......

Signed ....
Weighmaster.

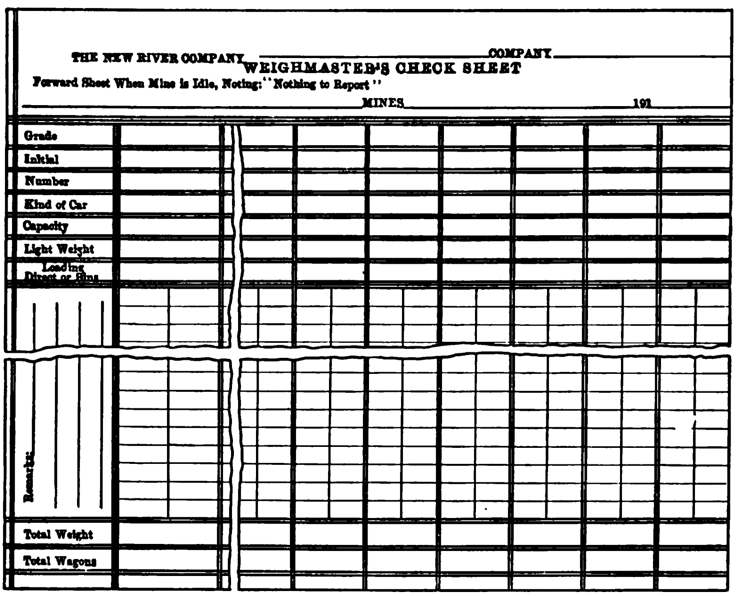
FORM 13.—Weighmaster's Daily Report Blank.

This recapitulation may, for convenience, be printed on the corner of the tipple sheet itself and should be signed by the weighmaster since he is the only man who knows what disposition is made of the coal and is responsible for its proper report.

Where the coal is dumped directly over the screen or from the weigh-pan into the railroad car and it is possible to obtain such a record, a check-sheet should be carried showing how much coal is loaded in each railroad car placed under the tipple. This check-sheet should show the number of the miner who produced the coal and the weight of each mine car. The aggregate weights of a number of mine cars dumped into this railroad car shows the total pay-roll weight of coal thus dumped. Such a check sheet is illustrated in Form 14.

If the coal shipped is mine-run, the wage scale being the same, and the loading equipment will permit such a record, a direct comparison can thus be had between the aggregate of these mine car weights and the railroad weight of coal loaded in any given car as afterwards ascertained by weighing on railroad track scales. If other grades of coal are loaded, statistics kept for that purpose will very soon show what should be the relative weight of the grade other than that upon which the wage scale is based, as a check upon the railroad weight.

After completing all these records they should be


THE NEW RIVER COMPANY ________ COMPANY

WEIGHMASTER'S CHECK SHEET

Forward Sheet When Mine is Idle, Noting: "Nothing to Report"

________ MINES ________ 191__

Grade								
Initial								
Number								
Kind of Car								
Capacity								
Light Weight								
Loading Direct or Bins								
Remarks:								
Total Weight								
Total Wagons								

FORM 14.—Weighmaster's check sheet.

turned over to the payroll clerk, where they become the basis of his payroll entry.

The total of the weights of the contents of mine cars dumped into railroad cars, as ascertained from this compilation, must agree with the amount shown by the weighmaster's recapitulation on the tipple sheet as "Coal Loaded Into Railroad Cars."

The pay-roll clerk, having received from the mine weighmaster a record of the coal loaded by each miner, enters the total daily credits of each miner on his payroll. Before doing so he should see that the statement showing production has been properly balanced against that showing disposition. It is necessary that some forms be prepared to bring together in semi-monthly totals the entire production and disposition figures. For this purpose a coal-proof, ruled to show a concise tabulation is convenient, similar to Form 15.

This form can conveniently be combined with the supplementary report of coal produced, covering deliveries to railroad locomotives, miners' houses, local sales, etc. More fully treated under "Sales Statistics" in a later chapter.

______ Mine COAL PROOF Month of ______ 192
All figures represent cwts.

Date	Pick Coal	Machine Coal	Company Coal	No check	Total Production	R.R. Cars	Mine Fuel	R.R. Engines	House Coal and Local Sales	No Check Credited		Total Production
1.												
2.												
3												
14.												
15												
[illegible]												
16.												
17												
31.												
[illegible]												
[illegible]												

FORM 15.—Coal proof.

The totals of the coal produced during these semi-monthly periods can be readily combined in order to make any statistical reports required showing a month's production. The aggregate individual items as carried to the pay-roll, when totaled for each of these semi-monthly periods, must balance with the coal proof, which is in effect a "control" account.

The daily report of cars shipped, which will be handled in a later paper, should carry a column to indicate the mine weight of the coal loaded in each individual railroad car. The totals of this column, accumulated for the month, taking into consideration the part loads at the beginning and end of the month, will again check the total production as carried on the coal proof, again taking into consideration the difference between the "no check" coal (that coming out of the mine without a proper miner's check) debited and credited.

To insure a proper check upon the quantity of coal delivered direct from the mine in wagon lots to tenants and other purchasers it is important that orders for such deliveries uniformly originate at the mine office, and be transmitted to the proper person charged with the delivery of such coal (usually the weighmaster or outside

No. 13751 ....19.....

....Outside Foreman or Weighmaster

Deliver to...House No. ....Check No ....

ONE LOAD R. M. [illegible] Lump **COAL** and attach this order to your coal sheet on the day of delivery.

Coal $..................Hauling $........ ....Scrip Clerk

FORM 16.—Retail delivery slip and order.

foreman) in writing. Such an order becomes his voucher for the delivery. It should be returned to the mine office each day attached to the weighmaster's tipple sheet, the aggregate tonnage equaling the quantity reported on that sheet as sold locally.

When so received by the payroll clerk it is the basis of his charge to the purchaser. A simple form of such order is illustrated in Form 16. If prepared for use with carbon paper and printed in multiple on sheets 8½ x 13 in. it will make a very convenient record. Notation should be made on carbon copies showing date of delivery, or the returned order may be pasted back on the stub for that purpose.

CHAPTER III

THE DAY LABOR RECORD

On the mine foreman usually devolves the duty of keeping a regular and systematic report of the time worked by day men. In some large organizations the operating department has made it a rule that only the mine foreman be allowed to keep time. In other organizations time is kept in the inside by the mine foreman or assistant foreman and on the outside by an outside foreman. Conditions at each mine or with each company frequently justify a departure from the first mentioned method.

That the record may be kept systematically, it is usually advisable for the payroll clerk, or some other employee charged with that duty, to lay out the time book, under proper sub-headings, in the method in which time is to be reported and in a method which lends itself to ready transfer of data to daily cost sheets or to the payroll summary. This can usually be done before the close of one pay period for the next one and even the names of employees may be written in by the clerk on the time book which is kept by the mine foreman, although some operations, for safety in auditing and that names may not be added by unauthorized people, require all of the names on the time book to be in the handwriting of the timekeeper. This last is a wise precaution, providing the timekeeper has been trained to work out his time book in a neat and legible manner.

For convenience, two time books should be used; one for the first half of the month, the other for the second half. They should be of a convenient size that they may be carried in the pocket of the timekeeper. They should be so ruled as to show the name (for convenience, the surname first), rate per day, the hours worked daily and the amount of earnings for the period.

It is desirable that at the head of the page provision be made so that the number of hours worked by the mine (measured by the period dumping coal) will be shown. A comparison of these figures with the amount of time reported as being worked by the various employees will immediately indicate whether the employee worked a full day, was released before the expiration of the day, or worked overtime.

By examining the time books, which he should do frequently, the superintendent can readily ascertain by this comparison whether any favoritism is being shown by the mine foreman or other foremen toward certain employees by giving them employment beyond the average. The superintendent and the mine auditors are also given an opportunity, through this method, of checking up violations of the wage scale. Mine foremen have been known to allow nine or ten hours a day in an eight-hour field for eight hours' work and thus, in effect, increase the wage rate. For this reason the management should insist upon an explanation of all overtime.

Another abuse frequently indulged in is the notation on time books, with a corresponding allowance, "Short Last Pay." Investigation of a number of these cases by operators has shown that frequently they were made to cover compensation other than time. Of course, sometimes these allowances are entirely legitimate; at other times auditors have found them a mere subterfuge to cover unauthorized payments. For this reason, where a notation appears indicating a shortage in a previous pay period, the timekeeper should be required to state the date upon which the service was performed, and the payroll clerk, by reference back to the time book for that period, may readily determine whether the allowance is one for omitted time or is some other allowance.

There is illustrated by using the "haulage" schedule of the National Coal Association's recommended form of cost sheet, a method of "blocking out" the time book. (For complete schedule see "The Payroll Summary" in a later chapter.) If this method is used throughout the schedule and the book is prepared by some one who has a knowledge of the results desired to be obtained, the compilation of daily cost sheets or payroll summaries will be a comparatively easy matter. This is shown in Form 17.

Time Book ______________ Mine — Period ending __________ 192

	1	2	3	14	15	Total Days	Rate	Amount
Hours Mine Worked	4	7	8					
Name Surname First Occupation								
Repairs to Haulage Engine								
Smith, John - Blacksmith	4	0	0					
O'Neil, Frank - Engineer	4	0	0					
Mine Car Repairs								
Hawk, Carl - Blacksmith	8	8	8					
Hood, Herbert - Carpenter	8	8	8					
Care and Maintenance Live Stock								
Rusher, Wm - Stable Boss	8	8	8					
Doe, John - Stable Labor	8	8	8					
Brown, Tom - Harness Repairman	8	8	8					
Thomas, John - Horse Shoeing	8	8	8					
Conducting Transportation								
Sanders, John - Boss Driver	4	7	8					
Baker, Chas Driver	4	7	8					

FORM 17.—Time book.

In many organizations since the time book is for the major portion of the day in the possession of the mine foreman, a duplicate time book, very much larger in size and giving more room for compilation, is kept for constant reference in the mine office. Where mine auditors are employed, the mine foreman's book is first checked against the office book to determine the accuracy of the latter and the totals from the office book are carried to the payroll. In order that the payroll record be kept up to date it is necessary that the mine foreman turn his time records into the office daily. This is particularly necessary in the case where stores are operated by the mining company and the miners are allowed to draw against their credits.

In the posting of this daily time book in the office it will be found a convenience and it will avoid error, if an entry is made in the space assigned for each day, indicating by zero when no labor is performed. If at the same time a similar mark in ink is made on the book of the timekeeper, so that no subsequent entries may be made without the knowledge of the payroll clerk, such an ink mark, under the pencil figures of the timekeeper, will generally show that an item has later been added.

Before turning in his time book at the close of each pay period the timekeeper should sign it on the last page used. The superintendent should examine the time book in detail and also sign it to indicate approval.

Some concerns have found it convenient to have a daily time sheet prepared and turned into the office each day by the timekeeper. Most operators consider the daily preparation of such a sheet wasteful of time and it is certainly not conducive to ease or accuracy in checking on the part of the traveling auditor or mine accountant.

CHAPTER IV

YARDAGE AND DEAD WORK

In addition to the tipple sheet which brings to the payroll clerk the report of the mining of the coal and the time book which brings into his hands the earnings of the day men, it is essential that he have also from the hands of the mine foreman a report of "Yardage and Dead Work."

"Dead Work" is an item which is imposed very largely by physical conditions and its general acceptance includes such things as yardage, break throughs, room necks and various allowances for working in wet places, etc. The allowance for "Yardage" is in addition to the regular tonnage rate because of the fact that miners working in narrow places are unable to produce as much tonnage and therefore earn less money than those working in rooms or wide places. It is, in effect, an allowance to increase earnings.

Additionally, it is frequently necessary in the entries to take down the roof or to rip up bottom to gain height for travel ways, haulage roads, etc. This narrow-work handicap in mine earnings is recognized in the making of the wage scale and is properly compensated for by an allowance to the miner in addition to his tonnage credit. In addition to the items enumerated such things as the dumping and storing of gob, cleaning up falls and re-timbering after them, handling squeezes and mine-fires and all other work imposed by adverse physical conditions should be charged to this account, which is, in short, "dead" work which does not primarily produce nor further the production of additional tonnage.

It is, of course, understood that in the development of the mine the driving of the entries, break throughs, etc., necessary to the development, that the projected tonnage capacity may be reached, shall be capitalized, but after that point is reached all work of this nature is simply expense. The ruling of the Federal Trade Commission in its 1918 Instructions for the Compiling of Coal Costs, providing that all rock tunnels, etc., more than fifty feet in length in an operating mine shall be capitalized is, in the opinion of most accountants and engineers, unreasonable and is one difficult of carrying out because of the fact that the ultimate length of such tunnels is not always known at the time when work is begun upon them. They

Mine Foreman's Report of Yardage and Dead Work

....Mine Pay Ending..

Check No.	Mine Location	R'm No.	No. Yards	Rate	YARDAGE							Other Dead Work	Total	COAL		SLATE		REMARKS
					Entry	Entry Break Through	Room	Room Break Through	Rails	Water				Ft.	In.	Ft.	In.	
Totals																		

....Supt. ....Mine Foreman

FORM 18.—Foreman's yard report blank.

add nothing to the value of the plant, produce no revenue coal and the cost of this advance work where the mine is already in operation, is properly a portion of the current operating expense.

There is reproduced in Form 18 a condensed form to be filled out by the mine foreman at the close of each pay period showing the information necessary to be conveyed to the payroll clerk to properly authenticate credits to employees for yardage and dead work.

Under most wage scales different rates are provided for pick and machine work, the allowances for yardage being divided in the case of machine mining between the cutter and the loader, while in the case of the pick miner the credit is, of course, not divided.

It is important that the total yardage, whether entry, break through or room necks, paid to the loaders, be checked against the yardage of the same classification paid to the cutters, since one class of labor cannot advance beyond the other where both are paid on tonnage. To illustrate, if loaders are paid for 50 yards aggregate advance, the cutters may not have an allowance in excess of that. The superintendent, payroll clerk and payroll auditors, in the examination of such yardage and dead work reports, should see to it in their examination that this yardage check is maintained.

The form provides a column under "Remarks," in which should be explained any unusual allowances. Provision is also made for the reporting of the thickness of coal and slate to be used in the instances in which an allowance on account of thin coal is made or where slate is to be taken down to gain height for working.

These yardage allowances are subject to an additional check by way of safeguard. Almost every mine has a survey by mining engineers, quarterly or more frequently. If the engineers be instructed to give a report of advance work, particularizing as to the number of feet advanced in each entry or break through and the numbers of the rooms turned from various entries, the mine foreman's semi-monthly report can readily be checked against the record and occasional duplicate payments may be caught. A good way to prevent such duplications is to sketch in on the engineer's projections semi-monthly the development reported by the mine foreman.

To sum up, the yardage report should cover all items to the credit of the employee for work performed not compensated for either by tonnage or by a rate per day or per hour. A properly ruled payroll sheet will permit the totals of the mine foreman's report to be readily checked to the payroll.

The Payroll.—The payroll clerk, having now in his possession a report from the weighmaster showing the coal produced daily throughout the pay period; from the mine foreman or other timekeepers a record of the labor performed by day men, and from the mine foreman a record of the yardage and deadwork to the credit of such miners as performed any such work, is in position to make his payroll and daily cost sheets.

An adequate payroll must provide in compact form necessary spaces to provide for the registration of the name of the employee, his check number, daily credits for mining and labor of any nature, and for the accumulation of these daily credits semi-monthly. It must further provide a record for the various transactions usually made covering merchandise, cash, rent, coal and hauling, smithing, charges for workmen's compensation when the laws so provide and for many miscellaneous charges for such things as may be furnished the employee by the company for his comfort and convenience. While overdrafts on an employee's account are always to be discouraged, in the nature of things, they will at times occur, and the form should also provide for a debit of that account.

Since it is the custom in most districts where stores are operated by the company, or where, through arrangements with other stores, orders are given on them to advance credit at the beginning of a pay period equal to the amount standing to the credit of the employee at the close of the preceding pay, it has been found by many operators a convenience to have the amount standing to the credit of the employee carried forward to the succeeding payroll where it is merely a memorandum and does not, of course, enter into the cross addition of the sheet.

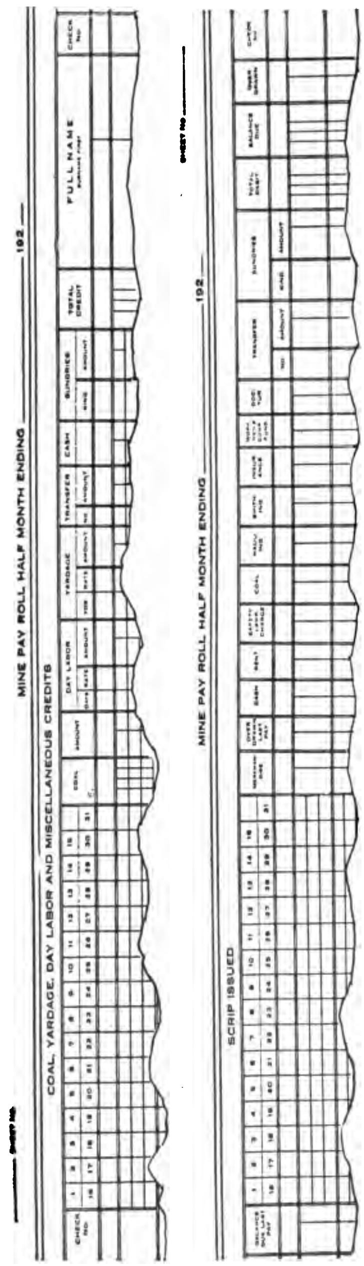
As has been indicated heretofore, because of the different classes of work performed by the same man within a pay period, for convenience in keeping the time record as well as because of the necessity for arranging a separation between pick mined and machine mined coal, it may be necessary to carry an employee's credits upon the payroll in more than one place. At the close of the pay period, however, these credits should be transferred to a single number in order to bring together the total of each employee's earnings and that deductions for items due the employer may be made. For this purpose a column should be provided for such a transfer. It is, of course, apparent that the debits and credits in these transfer columns will balance. A reproduction of a payroll sheet that can be used to considerable satisfaction is reproduced. It is ruled on both sides, 20¾ x 18 in., and should be made in loose-leaf form. When placed in the binder, open, a complete record of the earnings and deductions of each employee is readily accessible.

The daily totals of the coal columns may be checked against the daily totals of the analysis on the tipple sheet and the total for the pay period against the total production column on the coal-proof. The total amount earned by miners can be proved within a few cents by multiplying the total tons produced by the proper mining rate and checking the result against the aggregate amounts to the credit of miners as ascertained in detail, and indicated by the total "coal" column on the payroll.

The day labor column can be checked against the time book. The yardage can be proved by the totals of the yardage sheet.

Amounts held out of employees' envelopes to protect overdrafts should be reported on the cash book. If a multiple column cash book is kept, the "cash" column of the payroll may be checked against the "payroll" column on the cash book. It will readily be seen that every item here is subject to quick and easy verification by the payroll auditor.

On the debit side columns are provided for charges against the miner for store checks or "scrip" issued daily, the aggregate of these being shown in the merchandise column. This daily "scrip" issue is readily checked against the stubs of the checks torn from the books, and



Form 19.—Payroll. Above, front of sheet. Below, reverse.

the semi-monthly total is subject to quick audit by multiplying the difference between the beginning and ending number of each denomination of "scrip," which check should always be obtained by those assigned to the payroll audit.

The other items of cash, rent, safety lamp charges, etc., need no explanation but are the ordinary deductions common in almost every mine office. In this same class should also be provided a column for deductions on account of the check-weighman in the districts in which the wage contract provides for such a person.

The form it will be noticed, also provides, in addition to a column showing the balance due the employees, a separate column showing the amount overdrawn, if any.

If the dates as shown on the left of the top of the sheet are also reprinted at the bottom, below the total line it will be found very convenient in following through the columns and will frequently avoid error in posting coal, or the time credit, reduced to money, to the wrong column. It will also be found a convenience to carry a check number at either side of the payroll for the same reason.

When an office time book is kept it will be found unnecessary to post to the payroll in detail the earnings of day men, reference to the office time book itself giving the amount to their credit, but many concerns prefer to have the payroll show the full detail, or at least the daily amount standing to the credit of the day men.

Transfer of Accounts to Other Mines.—It frequently happens that employees may reside in houses belonging to one mine and work at another, or that their dealings with the merchandise department may be at two or more stores. They may leave one mine because of lack of employment and go to another of the same company. Under any of these conditions, that their accounts standing on the payroll may be collected, it is desirable that charges be transferred to the payroll over which the collection will be made, and the originating office be relieved. Columns have been provided on the payroll form for these transfers and the transfers between payroll num-

SEMI-MONTHLY TRANSFER OF ACCOUNTS

______________191__

______________SUPT. OR CLERK.

______________, W. VA.

DEAR SIR:-

ON YOUR______________MINE PAY ROLL ENDING______________191__

PLEASE COLLECT THE ITEMS LISTED BELOW AND CREDIT SAME TO______________ MINE. WHEN ENTRY HAS BEEN MADE ON YOUR PAY ROLL DETACH RECEIPT, SIGN AND RETURN SAME TO ACCOUNTING DEPARTMENT.

YOURS TRULY.

______________SUPT. OR CLERK

CHECK No.	NAME	MDSE.	RENT	COAL AND HAULING	MISCEL-LANEOUS	TOTAL

NO.______________

______________, W. VA.______________191

DEAR SIR:-

WE BEG TO ADVISE THAT THE ITEMS ABOVE HAVE BEEN ENTERED ON

______________MINE PAY ROLL MONTH ENDING______________191__

YOURS TRULY.

______________SUPT. OR CLERK

FORM 20.—Transfer-of-account blank form. The lower part is detachable.

bers, where an employee is working in two or more classes of labor.

It is important that one payroll be not relieved of these accounts until the items are taken up on the payroll to which transferred. For that purpose the form illustrated, Form 20, entitled, Semi-monthly Transfer of Accounts, will be found useful. It should be made in triplicate, the original copy going to the office to make the collection, a duplicate to the auditor, and the triplicate copy should remain at the office issuing it.

When this transfer is accepted the detachable portion of the form should be torn off and sent to the auditor as his notice that the transaction has been completed.

The Payroll Summary.—After the payroll has been completed, the proper deductions made and the net credits to the miner obtained, it is necessary that an abstract or summary of the details of the labor charges be made in order that the accountant may have the data necessary to be incorporated in the monthly cost sheets, and that the management may have something with which to study these costs in detail, if so desired. It is always desirable that the payroll itself, containing as it does the intimate details of miners' earnings and the deductions necessary to be made from them to bring them to a cost basis, be retained in the payroll office for reference.

Form 23 will bring labor details together concisely. This form follows in exact order the divisions recommended by the Cost Accounting Committee of the National Coal Association. The data required with respect to mining will be obtained from the "Coal" column of the payroll and will be proved against the "pick" and "machine" items on the coal proof. The details of the "day labor" will be found in the same sequence on the time book and will be checked against the "Day Labor" column on the time book. Where the time book is properly kept, abstracting the amounts to the payroll summary will be a very easy matter. The details of the "dead work" will be found on the mine foreman's report of yardage and dead work and will check against the "Yardage" column on the payroll.

It will be understood, of course, that in addition to the items entering directly into the cost of coal, for which the detailed analysis sheet is illustrated, there will be other items such as dwelling repairs, the cost of labor performed on incomplete plant, etc., which will also need to be provided for on the payroll summary. These items and others necessary to balance the payroll are shown in the following tabulation, Form 21.

Classification of Labor	Amount (Detail)	✓	Amount (Totals of Division)
Carpenters			
Painters			
Sanitary Work			
Cleaning up			
Total Dwelling Repairs			
Overdrawn Accounts			
Petty Cash			
Pay Roll Clerk			
Merchandise Salaries			
Merchandise—Teamster			
Mdse. Prop'n of Scrip Clerk			
Clearance			
Refund. Merchandise			
Rent			
Lights			
Insurance (List Names)			
Transportation (List Names)			
Propwood—Itemize			
Total Pay Roll			

Credit	Amount
Mdse. Store	
Mdse. Store	
Mdse. Store	
Overdrawn Last Pay	
Cash	
Rent	
Rent (Advance)	
Electric Lights	
Coal	
Hauling	
Smithing	
Hospital	
Workmen's Compensation	
Clearance	
Brass Checks	
Water Rent	
Safety Lamp	
Transportation (List Names)	
Total Deductions	
Amount Required to Pay	
TOTAL PAY ROLL	

FORM 21.—Some of the payroll accounts. FORM 22.—Credit accounts against payroll.

The payroll summary should also contain an additional column, or a supplementary sheet be provided which will permit the report to the accountant of the deductions for merchandise, cash advances, rent, charges for safety lamps, coal and hauling, smithing, workmen's compensation fund, payments for check-weighman, etc., etc., the total amount of the payroll chargeable to operation, other

FORM FOR DISTRIBUTION OF MINE LABOR IN CONFORMITY WITH REPORT OF COST ACCOUNTING COMMITTEE OF THE NATIONAL COAL ASSOCIATION.

NOTE.—Numbers in first column correspond with those on cost sheet page 23 of report as revised.

Account No.	Class of Labor	Item	Sub-Total	Amount
	Miners.........tons at			
	Helpers			
	Shot firers			
I a	Hand mining (Sub-total)			
	Undercutting..........tons at			
	Moving machines for cutters			
b	Undercutting (Sub-total)			
	Machine boss			
	Electricians and helpers			
	Blacksmith and helper			
	Sharpening picks			
c	Mining machine repairs and maintenance			
d	Pit car loading..........tons at			
II e	Machine mining (Sub-total), b, c and d			
	Company coal, tons only			
2	Mining, Total a and e, ...pay roll tons produced			
	Pit posts and caps			
	Teamster hauling same			
	Unloading from railroad cars			
	Sending timber into mine			
3	Timbering			
	Entry yardage			
	Air courses			
	Cross cuts			
	Break throughs			
	Room necks			
a	Narrow work (sub-total)			
	Clay veins			
	Spars			
	Horsebacks			
	Bone			
	Shooting rock			
	Lifting bottom			
	Taking down top			
	Stowing and dumping gob			
	Cleaning up falls and retimbering			
	Handling squeezes			
	Mine fires			
b	(Sub-total)			
4	Dead Work, Total a and b			
	Trackmen or roadmen (advance work)			
	Helpers (advance work)			
5	Tracklaying			
	Pumpers			
	Pipemen			
	Water bailers			
	Water haulers			
	Digging drains and sumps			
	Electricians			
	Blacksmiths			
	Other labor			
6	Drainage			
	Attending fan			
	Brattice man			
	Masons and helpers			
	Sprinkling			
	Fire bosses			
	Cleaning air courses			
	Safety lamp attendant			
	Repairs to fan			
	Repairs to other ventilating equipment			
	Repairs to safety lamps			
7	Ventilation			
	Hoisting or haulage engines (repairs)			
	Labor of other mechanics			
a	Repairs to haulage engines (sub-total)			
	Electrician			
	Motorman			
	Blacksmith			
	Labor of other mechanics			
b	Repairs and maintenance of motors			
	Carpenters			
	Blacksmiths			
	Other labor			
c	Repairs and maintenance of mine cars			
	Stable boss			
	Helpers			
	Harness repairs			
	Shoeing			
d	Care and maintenance of live stock			
I	Care and maintenance of equipment, totals a, b, c & d			
	Boss driver			
	Drivers			
	Brakemen			
	Motormen			
	Hoisting engineer (shaft)			
	Haulage engineer (drift or slope)			
	Trip riders			
	Couplers trappers			
	Greasers			
	Spraggers			
	Switchmen			
	Drying sand for locomotives			
	Bottom cagers			
II	Conducting transportation			
	Roadmen—Repairing and cleaning			
	Helpers			
III	Maintenance of way (Sub-total)			
8	Haulage and Hoisting, total			
	Weighmaster			
	Dumpers			
	Pushers			
	Top cagers			
9	Dumping and Tallying			
	Picking table labor			
	Loading boom labor			
	Other preparation labor			
10	Preparation			
	Yard boss			
	Trimmers			
	Checkers			
	Car Cleaners			
	Brakemen			
	Maintaining and operating mine tracks			
11	Railroad Car Loading and Yard Expense			
	Firemen			
	Engineers			
	Cleaning boilers			
	Handling ashes			
a	Generating power (Sub-total)			
	Bricklayers and helpers			
	Masons and helpers			
	Carpenters			
	Electricians			
	Boilermaker			
	Other labor			
b	Equipment repairs (Sub-total)			
	Sub-station attendants			
	Electricians			
c	Purchased power			
12	Power, total a, b and c			
	Carpenters			
	Painters			
	Other labor			
13	Repairs to Buildings and Structures			
	Clerks			
	Janitor			
14	Mine Office			
	Superintendent			
	Assistant superintendent			
	Mine foreman			
	Assistant mine foreman			
15	Superintendence			
16	Engineering			
	Sending supplies to mine			
	Warehouse			
	Teamsters			
	Unloading supplies			
a	General outside labor			
b	Welfare work at mine			
17	Sundries, total a, b, etc.			
21	Total Mine Operating Expense			

FORM 23.—National Coal Association distribution of mine labor form or payroll summary.

expenses and capital items being balanced by the above mentioned deductions plus the amount required to pay. A tabulation of the items generally deducted is found in Form 22.

No.......................... ....19......

....

IN ACCOUNT WITH

NATIONAL COAL CO

For month of........ ....19......

CR.			DR.		
By............ Cwt. at	....	......	To Store........................	....	......
By............ Cwt. at.........	....	......	To Overdrawn Last Month..	....	......
By............ Cwt. at	....	......	To Cash	....	......
By............ Hours at..........	....	......	To Rent & Elec. Lights....	....	......
By............ Hours at	....	......	To Coal........	....	......
By............ Hours at..........	....	......	To Hauling......................	....	......
By............ Yards at.........	....	......	To Smithing........	....	......
By............ Yards at.........	....	......	To Insurance...................	....	......
By............ Yards at.........	....	......	To Workmen's Com. Fund	....	......
By............ Board or Labor	....	......	To Doctor..................	....	......
By............ Cash	....	......	To Safety Lamp......	....	......
....	....	......	To Board or Labor...........	....	......
....	....	......	....	....	......
Total..........................	....	......	Total........................	....	......
To Balance Due Company...	....	......	By Balance Due Workman..	....	......

E. & O. E. Liable for any Subsequent Indebtedness.
Retain This Statement.

Cut This Receipt Off and Present at the Pay Window.

No.................. . ..., 19......

RECEIVED OF **NATIONAL COAL CO**

.... DOLLARS,

$...................... ....in full of all claims to...................................19......

Witness at Signing: Sign Here.

....

NOT TRANSFERABLE. If this receipt is lost after signing, notice must be given in writing at our office before pay day.

FORM 24.—Payroll Statement. The receipt is perforated and may be torn off.

The payroll summary should be authenticated by the payroll clerk and the superintendent, the certificates stating on behalf of the superintendent that he certifies to the correctness of the hours of labor performed, tons of coal mined, yards of entry, etc., driven, the rates of pay,

MINER'S EARNINGS AND EMPLOYMENT RECORD

Name________________________________

Address________________________________

Married______Nationality ____________Age____Form 1078 Signed

Miners Certificate No.___________How Long Mining____________

Previously employed________________________________

Left employment________________________________

Pay Period	Days Worked	Occupation	Tonnage Mining Am't	Yardage and Dead Work	Day Labor Rate	Day Labor Am't	Gross Earnings	Occupational Deductions: Smithing	Occupational Deductions: Explosives	Occupational Deductions: Check Weighman
Dec.2 Hf										
Jan.1 Hf										
Jan.2 Hf										
Feb.1 Hf										
Feb.2 Hf										
Mar.1 Hf										
Mar.2 Hf										
Apr.1 Hf										
Apr.2 Hf										
May 1 Hf										
May 2 Hf										
June 1 Hf										
June 2 Hf										
July 1 Hf										
July 2 Hf										
Aug.1 Hf										
Aug.2 Hf										
Sept.1 Hf										
Sept.2 Hf										
Oct.1 Hf										
Oct.2 Hf										
Nov.1 Hf										
Nov.2 Hf										
Dec.1 Hf										
Dec.2 Hf										
Totals										

FORM 25.—Record of employee's earnings.

and that he has personally examined the payroll in detail.

It will be found a great convenience if these payroll summaries be made up in manifold books, a carbon copy being retained at the mine and copies furnished the accountant for incorporation in the cost sheet and to the mine management for study of the details of labor cost.

The payroll being completed, some periodic statement of earnings of each individual employee is necessary, that he may have knowledge of the standing of his account both for services performed and for occupational deductions, rent, store account, etc. This form is usually combined with a receipt, and may be in form something on the order of Form 24.

Some prefer the issuing of a pay envelope somewhat larger than the ordinary, on which a duplicate of the pay statement appears.

The payroll receipts should be arranged numerically after pay day to expedite the audit of the accounts by the payroll auditor.

Record of Earnings of Employees.—It will be found convenient in the compilation of reports to the federal and state government departments to have a record kept currently showing the earnings of miners and other employees. Such a record will be valuable in the preparation of facts for use in wage negotiations. Lack of such data cannot fail to put those negotiating a wage scale at a disadvantage. A simple form of such report is illustrated in Form 25.

CHAPTER V

DAILY COST SHEETS

Since the cost of operating a coal mine cannot be obtained completely for a given month until usually 15 or 20 days after the month has closed, because of the difficulty of securing railroad weights to obtain the tonnage, which is the basis of cost, it is desirable, if not indeed absolutely necessary, that the mine management be furnished from day to day with a report which will show at least the labor cost in detail. By having such a daily report of labor, the manager has, so to speak, his hand upon the pulse of operation.

The daily report should follow the ordinary and natural method of operation of the mine and should, in all respects, contain the same day labor items in the same sequence as on the payroll summary, which was dealt with in the preceding chapter. The ruling of the form for the daily cost sheet should provide for data as to number of men of each class employed, the hours worked by each, the rates per day, the amount for each occupation and a short extension to show the total cost by subdivisions to expedite comparisons. The classification of labor is the same as that shown upon the payroll summary. The arrangement of the headings of such a daily cost sheet is as follows:

OCCUPATION	No. of Men	Hours Worked	Rate per Day	AMOUNT (each occupation)	TOTAL (Division Only)

FORM 26.—Headings of Daily Cost Sheet.

Many operators have recognized the value of establishing a normal or standard cost sheet in which, after study of all conditions, there will be incorporated all of the labor necessary to produce the normal tonnage of the mine, taking into consideration always in fixing the normal tonnage the probability of partial car shortage, mine disability, etc. In other words, in fixing upon such a standard cost sheet the highest possible productive capacity, with no handicaps, should not necessarily be the gauge.

In such a theoretical or standard cost sheet will be included the number of men of each class of labor ordinarily employed, the rate per day and the aggregate cost. The total, divided by the normal or standard number of tons of coal to be produced will give a theoretical cost per ton of production.

With such a standard cost sheet should be compared the daily cost sheets showing actual performance and the variations from the standard cost can be readily determined and made the subject of inquiry by the management. These daily cost sheets should also be examined in days in which for any cause the full number of hours ordinarily worked is not operated by the mine, in order to see what labor, if any, is retained beyond the number of hours which the tipple operated. The reason for retaining such labor beyond the operating period should be made the subject of investigation.

Every manager recognizes the fact that some classes of labor can be more advantageously employed when the mine is not in full operation and this class is, to the experienced manager, of course, immediately apparent, but these daily cost sheets will at times bring to him cases in which unnecessary labor is retained, due either to lack of judgment on the part of the foreman or to favoritism.

The daily cost sheet, for convenience, should carry the necessary details to show not only the result of the current day's operation in total and in such subdivisions as the mine management may feel necessary, but should show also the previous period and the cumulative figures to date, something in the order shown in Form 27.

PRODUCTION STATISTICS

Hours Worked Plus Lost Time Must Equal Total Possible Working Time

Period	Hours Worked	LOST TIME. Give detail under Remarks.				PICK COAL			MACHINE COAL			TOTAL			TOTAL LABOR COSTS	
		No. Cars	No. Orders	Accidents	Other Causes	Miners	Tons	Per Man	Miners	Tons	Per Man	Men	Tons	Per Man	Amount	Per Ton
Today																
Previous																
To Date																
														Estimated		
														Difference		

Give Detail of Accidents, Delays, Etc. ....

....

.... Superintendent

FORM 27.—Daily Cost Sheet. Summary for recording hours of labor and labor cost.

Some operators have found it desirable to establish an idle day cost, incorporating in the standard or theoreti-

Boss Driver's Daily Report

__________ Mine __________ 191__

Sec. No.	Location	Loco. or Mule	Number Miners Today	Cars Coal Hauled	Cars Slate Water	Total Labor Today	Hours Worked Today	REMARKS (Give cause of lost time)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
TOTAL TODAY								

This report to be made by Boss Driver, Motor Boss or Foreman and turned into office daily.

.... Sign here

FORM 28.—Boss driver's daily report blank.

cal idle day cost sheet only such labor as it is absolutely necessary to retain on Sundays or idle days in order to ventilate the mine, keep the pumps running and for the time of watchmen and other such labor. Any variations from standard in this respect must also be the subject of complete investigation.

Supplementing the daily cost sheet, that the mine foreman and superintendent may have information as to the daily performance of locomotives and drivers it may at times be desirable to have a report from the various sections of the mine as to pertinent phases of transporta-

STABLE BOSSES' DAILY REPORT

__________ MINE __________ 191___

	HAY	OATS	CORN	ALFALFA	SALT
Pounds on hand at Beginning of day					
Pounds delivered to Store					
Pounds fed today					
Pounds delivered to other Mines					
Pounds on hand at the close of day					
Pounds received today					
Total pounds to be carried forward					

Number mules fed______ Number mules working______ Number mules received today______

Did mules have sufficient water______ How many disabled mules in stable______

To be made up daily and delivered to Supply Clerk or Mine Office.

__________ STABLE BOSS

FORM 29.—Stable bosses' daily report blank.

tion. Such a report, Form 28, designated Boss Driver's Report, is herewith shown.

The cost of care and feeding of the livestock is an item of much importance, and one which demands the careful attention of the local management. Unless carefully supervised, the animals may be underfed, but more likely is feed wasted because of improper handling or carelessness. A short form of report of feed used and inventory of quantities on hand daily, as shown in Form 29, will bring the facts to the attention of the superintendent and form the basis of the charge to the monthly cost for the value of such supplies consumed.

CHAPTER VI

ACCOUNTING FOR SUPPLIES

In importance second only to the proper accounting for the labor in connection with costs in coal mines, is the accounting for supplies. In fact, it is sometimes even more difficult to draw the proper distinction between capital investment and expenses in supplies than it is in the matter of labor.

The proper distinction between capital and operating expenditure is set out in the "Report and Suggestions of Committee on Standard System of Accounting and Analysis of Cost Production," of the National Coal Association, on page 8, as follows:

"The drawing of distinctions between capital and operating expenditures, in the accounting involved in permanent enterprises, is a favorite field for discussion among accountants, but in the case of coal mining or other wasting enterprises, experience teaches that the field for discussion, if indeed there be any, is extremely limited.

"After a coal mine has been developed and equipped to its contemplated or possible capacity, it is a constant consumer of material and supplies and equipment, which, though nominally of a durable nature, are subject to destructive wear and tear, by reason of the uses to which they are put, and all these appliances must be kept in repair to do their work or the output cannot be maintained.

"Mules and pit cars are constantly worn out and have to be replaced and as the working faces advance with the exhaustion of the coal, the length of haul, the consequent time of circulation of pit cars between the working face and dump increases, more motors, mules and pit cars have to be supplied to maintain the output and the more motors, mules and pit cars in the mine, the greater expense for replacements and repairs.

"Also, with the advance of workings, more rails have to be laid and more copper wire or other conductors put up to carry power to the working faces to maintain the output. They remain in place until the mine is exhausted and when they are recovered have but little net scrap value. In fact, any net salvage is relatively very small.

"The fact that these expenses are continually recurrent and practically a fixed factor in the cost of production per ton from year to year, proves that they constitute an operating rather than a capitalizable expense.

"This being so, it makes no difference to taxable income whether they are charged immediately to operating expense or written off by deductions representing depreciation allowances which would have to be readjusted and compounded from year to year. As a practical matter, it is better to dispose of such expense by direct charge to operating expense rather than taken care of by vexatious refinements of accounting, that would be necessary if these items be capitalized and 'depreciated.'

"That this proposition is now acceptable to the Department is substantiated by:

"REGULATIONS 45—REVENUE LAW OF 1918

"Art. 222. *Charges to capital and to expense in the case of mine.*—In the case of mining operations all expenditures for plant, equipment, development, rent and royalty prior to production and thereafter all major items of plant and equipment, shall be charged to capital account for purposes of depletion and depreciation. After a mine has been developed and equipped to its normal and regular output capacity, however, the cost of additional minor items of equipment and plant, including mules, motors, mine cars, trackage, cables, trolley wire, fans, small tools, etc., necessary to maintain the normal output because of increased length of haul or depth of working consequent on the extraction of mineral and the cost of replacements of these and similar minor items of worn-out and discarded plant and equipment, may be charged to current expense of operations, unless the taxpayer elects to write off such expenditures through charges for depreciation."

Article 222, of Regulations 45, as first issued, which is reproduced in the paragraph immediately preceding, was later altered by the Bureau of Internal Revenue to read as follows:

"Art. 222. *Allowable Capital Additions In Case of Mines.*—(a) All expenditures for development, rent and royalty in excess of receipts from minerals sold, shall be charged to capital account recoverable through depletion, while the mine is in the development stage. Thereafter any development which adds value to the mineral deposit beyond the current year shall be carried as a deferred charge and apportioned and deducted as operating expense in the years to which it is applicable.

"(b) All expenditures for plant and equipment shall be charged to capital account recoverable through depreciation, while the mine is in the development stage. Thereafter the cost of major items of plant and equipment shall be capitalized but the cost of minor items of equipment and plant, necessary to maintain the normal output, and the cost of replacement may be charged to current expense of operation."

Members of the Internal Revenue Bureau staff have stated that this charge does not in any way affect the interpretation by the Bureau of the distinctions between capital and operating expenditure. The importance of this division, which is based on sound accounting principles and the equity of which is recognized by the Treasury Department, cannot be too carefully observed. It naturally follows that anything which will permanently and materially increase production and decrease costs should be capitalized and that all other items of minor importance should be treated as items of expense. Any other method of handling is merely borrowing earnings from the future. If a single item is of sufficient value as to materially disturb the general cost level it should be spread over a sufficient period to avoid such a disturbance through a charge to deferred expense.

It naturally follows that supplies used in the operation of a mine should be charged to the same general account as the labor of installing them.

Method of Accounting for Supplies Used.—Where at all practicable, the proper method of handling supplies is through a supply house to which all material when purchased should be charged to be delivered to the mine on requisition of the proper operating official.

Practical difficulties frequently make it inexpedient, even impossible, to actually provide a supply house. It is recognized that coal mines cover large areas and that bulky supplies, such as mine rails, pit props, etc., are frequently delivered to a number of places outside the mines for convenience of handling when needed. Regardless of this fact, however, it is possible to keep a record of such supplies as they are taken into the mines, and while not directly under the eye of the storekeeper such supplies can be accounted for through the regular requisition form just the same as the supplies which are taken from a supply house.

Where a supply house is maintained, a requisition or

ORDER FOR MINE SUPPLIES

.... Mine .... 19....

Supply Clerk. Please give bearer the following described articles:

Quantity	Description of Article	For use of	Cost	Value

Signed................................

FORM 30.—Order blank for mine supplies.

order for mine supplies should be signed by the proper official and delivered to the storekeeper. Such a requisition is reproduced in Form 30.

This requisition should, preferably, be made in duplicate, one copy to be retained by the storekeeper, the other copy, after having the price and value extended, to be passed along to the purchasing agent or the accounting

DAILY REPORT OF SUPPLIES USED

......................Mine ....192....

The following is a list of the supplies used at this mine today.

MINE TIMBERS

This includes all timbers used in Mine, such as ties, rails, posts, caps, etc.

Quantity	Full Description of Article	Cost		Amount	

FORM 31.—Mine supplies daily report blank.

officer for his record and for charge to the proper division of cost.

Where there is no storehouse and no general supervision of stores under the direct care of storekeeper, somewhat the same value can be obtained through having a daily report of supplies used which should be made by the outside foreman or some one who is entrusted with that particular duty. This daily report should provide spaces for the reporting of supplies under the same general headings as the cost sheet.

One section of a suggested form to cover this method of handling is shown on the preceding page, the mine timber section being used for illustration (Form 31).

Through this method of handling the unit cost should be supplied by the purchasing agent of the company, the extension completed, and at the end of the month a recapitulation be made showing the value of supplies used; specifying which are properly chargeable to mine timbering, dead work, etc., and so on throughout the schedule.

Some operators prefer to charge to cost their supplies at the time of purchase, and through a system of monthly inventories, credit the operating account with the material not used. This method of handling is, in the opinion of a great many operators and accountants, inaccurate. Many supplies are of a nature that they may possibly be used in one of a half dozen classes of operation. There is not the opportunity for the same supervision over their use as there is through the system of requisition on a storehouse.

Taking the monthly inventories is expensive. These inventories, to be of real value, should be quite voluminous, covering practically every item ordinarily used in the operation of a mine.

Some operators have prepared inventory blanks in which are listed only the bulky materials such as mine timber, props, feed, steel rail, etc., which run quickly into large amounts of money, but it has been found from actual experience that such an inventory covers in value probably not over 50 per cent of the supplies actually on hand at the mines and there is a difficulty through any inventory system of crediting to the same subdivision of cost to which they were charged, the value of supplies which are of a nature that they might be used for two or more purposes.

For the use of those who prefer such a method however, there is here reproduced a form which by rubber stamp impression on the back of the invoice will give the

PRICE Correct, F.O.B. Shipping Point / Destination

....
Purchasing Agent

Material
Received.................. Mo.................. Day

Quality.................. Quantity..................

....

Charge.................................... Mine or Shop

To be used as follows:..........................

	$		Repairs to Buildings and Permanent Structures	$	
Mining			Repairs to Buildings and Permanent Structures		
Timbering			Mine Office		
Deadwork			Superint'nd'nce		
Track Laying			Engineering		
Drainage			Dwelling Repairs		
Ventilation			Capital Acc't		
Haulage and Hoisting			Personal Acc't		
Dumping and Tallying			General Exp.		
Preparation					
Railroad Car Loading and Yard Expense					
Power					

FREIGHT OR EXPRESS
$ { PREPAID / COLLECT } Charge { SHIPPER / Consignee

APPROVED {
.... Receiving Supt.
.... Master Mechanic
.... General Mgr.

FORM 32.—Distribution of charges.

necessary information, that analysis of the supply charges may be made.

It is essential, of course, that all of this information be supplied at the mine, since nobody but the operating officials on the ground have definite knowledge as to the purpose for which such supplies were ordered.

The accounting procedure, in this case, is extremely simple. After the proper receipt has been acknowledged as provided by the spaces on the form and the proper approvals secured, the invoices themselves are vouchered and charges made through the purchase register to the proper division of cost.

Still another class of operators prefer to charge all supplies to a single supply account and to make no attempt to allocate supply costs against the natural subdivision of operation. While the cost and inconvenience of making a proper subdivision is considerable, yet it has been the experience of most operators who have tried both methods that in the long run there is a very considerable financial saving through both the supply house method and through having a very definite knowledge of the use to which every article of supplies is put.

CHAPTER VII

POWER HOUSE FUEL

The coal produced at the mine and burned under the boilers for the generating of power for use in the operation of the mine is a proper charge to operation. This is the only expense about a coal mine which cannot be charged directly to some one subdivision of the operation. To the cost of operation of the power house should be charged the fuel, the wages of the firemen, ash haulers, brick layers and attendants used in the construction and repair of boiler walls; generator and compressor attendants in electrical and air installations and such part of the time of the hoisting engineer, electrician and other mechanics as may be used in the construction and repair of boiler plants, electrical installation and other such equipment in power houses. In addition to this, where water is purchased, the water becomes a proper charge to power plant.

There has been no little discussion as to the proper rate per ton for use in charging to operation the coal consumed under the boilers in the generating of power. Some operators prefer to charge this at the cost of production as indicated by the preceding month's cost sheets, excluding, of course, selling expenses. Some have made charges on the basis of the commercial contract which they may have bringing them the lowest sales returns, based on the idea that this coal if not used under the boilers might have been sold for at least that rate.

It is a recognized principle that no anticipated profit should enter into any element of cost and for that reason when this question was up for discussion before a meeting of accountants of the bituminous coal industry, held some months ago, the consensus of opinion was that coal used for mine fuel should be charged according to the generally accepted method of pricing inventories, namely, at cost or market, whichever is lower. Because of the difficulty of ascertaining the current cost at the time when the boiler fuel charges would need to be made, it probably would be most advantageous to use either the basis of the preceding month's cost, excluding selling expense, or the cumulative average cost figures for the year to date.

The instructions issued by the Federal Trade Commission in connection with the latest reports required from coal operators reads: "No charge should be made to 'Generating Power' for coal used that is produced at the mine to which the power is supplied." These instructions marked a departure from the plan and theory theretofore followed by the Federal Trade Commission. The cost sheet issued by them for the year 1917 and which was used for the year 1918, provided for the inclusion of produced coal in power house fuel. The instructions in connection with the forms issued for the year 1918 were as follows:

"Power-house Fuel—This account shall include the cost of fuel used in connection with coal-mining operations. If the fuel used is coal mined by the operator, it shall be charged into this account at the cost per ton shown for the preceding month. In determining the cost of this fuel, selling expense shall be excluded."

It is the consensus of accounting opinion in the bituminous industry that coal burned under the boilers is properly a portion of the cost and that the divisor for coal cost is the entire tonnage of coal produced, rather than that sold as advocated by the Federal Trade Commission. Most operators have accumulated statistics running back over a number of years in which boiler coal has been included as a portion of the cost of production. Many companies operating more than one mine have some mines where power is generated; other mines where power is purchased. Some plants operate through individual power plants; other through a central power plant.

For the purpose of internal comparison, it is absolutely essential that the value of coal consumed under the boilers be treated as a portion of cost. Furthermore, the management is frequently called upon to decide whether or not it is more advantageous to continue the operation of a steam plant or to install electrical equipment, to be operated either with generated power or with power purchased and the knowledge of the cost of generating power with produced fuel is essential information before the advantage of one system can be ascertained as compared with the other.

In arriving at this conclusion there will necessarily be taken into consideration the fact that many mining leases provide that fuel produced at a mine and used under the boilers may be so used without the payment of royalty on the portion used, whereas if such coal is diverted to commercial use it is subject to royalty payments. The loss of the free use of this coal sometimes makes a considerable difference in the operating cost and should be given consideration in the determination of policy. At the same time it may also materially increase the volume of coal released for commercial sales and is, to that extent, at times a great advantage.

If outside power is purchased it should be charged to "Power." After the total cost of power has been ascertained, whether generated or purchased, it may be divided and allocated against the various subdivisions of operation. "Mining" should be charged with the power used in undercutting by machines. To "Haulage and Hoisting" should be charged the cost of power used by the hoisting engines and haulage engines or locomotives. "Preparation" should be charged with the cost of power used in the operation of shaker screens, picking tables, etc., "Ventilation" with the power used in driving fans and so on throughout the schedule.

Some operators, however, prefer to allow "Power" to stand by itself as a single item of operation. Where in the judgment of the management this is advisable there can be no objection taken to it.

CHAPTER VIII

ROYALTIES

One of the most troublesome things to account for in connection with the operation of a coal mine is for the royalties paid on leased tracts. Where a mine is operating in a single tract of coal belonging to one lessor company, this is very simple since the entire tonnage produced will be reported. Where it happens, as it frequently does, that coal is being mined from a number of leased tracts or partly from leased tracts and partly from fee holdings, it is necessary that great care be taken to insure the proper division between the interested parties, and the accounting is considerably complicated through the requirements of the lease that distribution be made among a number of parties interested in the various leaseholds. These lessor parties change from time to time because of the sale of interests, or probably more frequently because of division among the heirs of an estate.

If the interested lessors can be brought to an agreement to accept the proportionate part of the production of a mine based on the full tonnage of recoverable coal, measured by the acreage of the lease or in other words to pool their acreage, the accounting method is correspondingly simple, it being only necessary to ascertain with reasonable accuracy the number of acres of mineable coal in each tract and pay each lessor monthly for the number of tons produced, measured by the percentage which his acreage bears to the total acreage of the mine.

Frequently, however, such an agreement cannot be reached and it becomes necessary to identify definitely—

even down to the detail of the weight of individual mine wagons—the tonnage produced from each leased tract. This can at times be accomplished through the assignment of a separate set of miners' checks to the miners operating in such a leased tract, but even with this safeguard it is necessary that the mining from these sections be given the closest scrutiny on the part of the mine foremen, engineers and management, since in the development of the mine and the driving of rooms, boundaries of

Original Copy to be forwarded to Mining Engineer immediately upon completion of Pay Roll. Mining Engineer to certify and forward same promptly to Chief Accountant

Report of Coal Mined

From .... *Leased Tract*

at .... *Mine. Pay Ending* .... *191*....

Check No.	CWT.	✓	Period in which Royalty Coal Reported Herein was Mined				Location of Working Place Give Number of Room and Entry	Remarks
			From		To			
			Month	Day	Month	Day		
Total Cwt.								
Total Tons								

I hereby certify that I have carefully compared the above listed working places with the ROYAL locations shown on the MINE MAP, and to the best of my knowledge this report is correct.

....
Superintendent

I hereby certify that the working places mentioned herein are all located in the leased tract as stated.

....
Mining Engineer

FORM 33.—Semi-monthly report of royalty coal.

the various tracts are frequently crossed and it becomes necessary to know during each pay period just where every miner is working and the date on which the property line is crossed in the mining.

Where this condition prevails it will be found useful, if not absolutely necessary, that a report in detail be made by the mine superintendent or the mine foreman showing the check number of the employee working in leased tracts, and the tonnage produced between pay dates or between the beginning of a pay and the date on which the property line is crossed, each operative being located by working place, that is, by number of room and entry.

The report bringing this information, having been furnished by the mine official, should be checked by the mining engineer against the mine map to prove the location of the working places at that time within the various lease lines. After being properly authenticated, this information should be passed to the accountant as his record. For convenience such a report should be prepared on sheets approximately $8\frac{1}{2} \times 13$ in. A condensed copy of such a form is reproduced in Form 33.

Royalty should include any payments made for the privilege of mining coal from leased property. Where no minimum tonnage is stipulated in the lease, or where the production exceeds the minimum, the royalty to be charged to cost monthly is the number of tons of coal produced, multiplied by the rate per ton, if payable on the tonnage basis. Where the lease provides for a yearly minimum tonnage which is not mined or the equivalent in money, whether based on a fixed sum, a rate per ton, or per acre, the monthly proportion is the minimum divided by twelve.

When the month's production does not equal this amount the difference between the earned royalty and the monthly minimum should be capitalized as Advance Royalty, pending its recovery. When the recovery period is limited under the lease that proportion of the Advance Royalty outlawed or lost by time limitation should be taken into cost month by month by being credited to the Advance Royalty account and charged to cost (royalty) in addition to the regular monthly estimate based on current production.

In some well considered cases where the minimum required is so large as to preclude the possibility of its production, the monthly minimum may be charged direct to cost rather than being temporarily capitalized through the Advance Royalty account.

Care must be taken not to build up in the Advance Royalty account an asset which cannot be recovered because of time limitations stipulated in the lease.

Since royalties are payable usually on the quarterly basis and based on yearly minimums, in the accounting procedure the monthly charges should be made to "Royalty" and credits be set up to an account designated "Royalty Not Due." When payments are made the charge is to the account "Royalty Not Due."

Royalties being based on tonnage, it is of course, essential that before payments be made the production be balanced against the shipments since it frequently happens that the lease provides for a report showing car numbers and weights. This is unnecessary in the event the lease provides as leases occasionally do for payment on the basis of the aggregate weights of coal paid to miners.

CHAPTER IX

DEPLETION OF MINERAL

Depletion is an account set up to take care of the exhaustion of mineral products taken out of the land. The product becomes stock in trade as soon as it is extracted, and it naturally follows that whatever the land was worth at the time of purchase, or if revalued at date of March 1, 1913, it is worth, after the extraction, an appreciable amount less.

Provision should therefore be made through depletion for an account to return to the owner, through adequate charges to cost, the full value of the lands purchased, less any value existing in the surface, by setting aside in a reserve fund with a corresponding charge to cost of a sufficient amount per ton to return the investment. Failure to provide such a fund will necessarily result in the operator having to write off large losses at the time of the exhaustion of the mineral and will prevent the return to the stockholder of the capital invested by him.

From the standpoint of taxation, this matter of the depletion of mineral has been the subject of voluminous regulation by the Internal Revenue Bureau. Since their regulations follow, generally, very good accounting practice, they are reproduced below. The law is as follows:

"Sec. 214, 1918 Law. (a) That in computing net income there shall be allowed as deductions:

"In the case of mines, oil and gas wells, other mineral deposits and timber, a reasonable allowance for depletion and for depreciation of improvements, according to the peculiar conditions in each case, based upon cost including cost of development not otherwise deducted: *Provided,* That in the case of such properties acquired prior to March 1, 1913, the fair market value of the property (or the taxpayer's interest therein) on that date shall be taken in lieu of cost up to that date."

The regulations of the bureau are much more full and specific than the law and provide:

"REGULATIONS 45—1918 LAW

"The essence of these provisions of the statute is that the owner of mineral deposits, whether freehold or leasehold, shall within the limitation prescribed, secure through an aggregate of annual depletion and depreciation deductions the return of either (*a*) his capital invested in the property, or (*b*) the value of his property on the basic date, plus subsequent allowable capital additions, but not including land values for purposes other than the extraction of minerals.

"Operating owners, lessors, and lessees, whether corporations or individuals, are entitled to deduct an allowance for depletion and depreciation, but a stockholder in a mining or oil or gas corporation is not allowed such deductions."

With respect to depletion allowed to the owner, Article 202 is quite specific. It reads:

"Capital recoverable through depletion deduction in the case of an operating owner.—In the case of an operating owner in fee, the capital remaining in any year recoverable through depletion and depreciation deductions is (*a*) the cost or value of the property at the basic date plus (*b*) subsequent allowable capital additions and minus (*c*) depletion and depreciation sustained, whether legally allowable or not, from the basic date to the taxable year, and minus (*d*) the value of the land at the basic date for other purposes than mineral production. The capital recoverable through depletion is the total capital remaining less the sum recoverable through depreciation."

That the taxpayer may have no doubt as to just how to determine the value of the mineral, both when figured upon the basis of cost and when figured upon the basis of the fair market value, Article 205, determining cost and Article 206, determining the fair market value as of a specified date, are here quoted:

"Art. 205. Determination of cost of deposits—In any case in which a depletion or depreciation deduction is computed on the basis of the cost or price at which any mine, mineral deposit, mineral right or leasehold was acquired, the owner or lessee will be required to show that the cost or price at which the property was bought was fixed for the purpose of a *bona fide* purchase and sale, by which the property passed to an owner in fact as well as in form other than the vendor. No fictitious or inflated cost or price will be permitted to form the basis of any calculation of a depletion or depreciation deduction and in determining whether or not the price or cost at which any purchase or sale was made represented the actual market value of the property sold, due weight will be given to the relationship or connection existing between the persons selling the property and the buyer thereof."

"Art. 206. Determination of fair market value of mineral property. —(*a*) Where the fair market value of the property at a specified date in lieu of the cost thereof is the basis for depletion and depreciation deductions, such value must be determined, subject to approval or revision by the Commissioner, by the owner of the property in the light of the conditions and circumstances known at that date, regardless of later discoveries or developments in the property or subsequent improvements in methods of extraction and treatment of the mineral product. *The value sought should be that established assuming a transfer between a willing seller and a willing buyer as of that particular date.* The Commissioner will lend due weight and consideration to any and all factors and evidence having a bearing on the market value, such as cost, actual sales and transfers of similar properties, market value of stock or shares, royalties and rentals, value fixed by the owner for purpose of the capital-stock tax, valuation for local or State taxation, partnership accountings, records of litigation in which the value of the property was in question, the amount at which the property may have been inventoried in probate court, disinterested appraisals by approved methods such as the present value method and other factors.

"(*b*) To determine the fair market value of a mineral property by the present value method, the essential factors must be determined for each deposit included in the property. The factors are (1) the total quantity of mineral in terms of the principal or customary unit (or units) paid for in the product marketed, (2) the average quality or grade of the mineral reserves, (3) the expected percentage of extraction or recovery in each process or operation necessary for the preparation of the crude mineral for market, (4) the probable operating life of the deposit in years, (5) the unit operating cost, i. e., cost of production exclusive of depreciation and depletion, (6) expected average selling price per unit during the operating life and (7) the rate of profit commensurate with the risk for the particular deposit. When the deposit has been sufficiently developed, these factors may be determined from past operating experience. In the application of factors derived from past experience full allowance should be made for probable future variations in the rate of exhaustion, quality or grade of the mineral, percentage of recovery, costs of production and selling price of the product marketed during the expected operating life of the mineral deposit.

"(*c*) Mineral deposits for which these factors may not be determined with reasonable accuracy from past operating experience may, with the approval of the Commissioner, be valued in a similar manner; but the factors must be deduced from concurrent evidence such as the general type of the deposit, the characteristics of the district in which it occurs, the habit of the mineral deposits in the property itself, the intensity of mineralization, the rate at which additional mineral has been disclosed by exploitation, the stage of the operating life of the property, and other evidence tending to establish a reasonable estimate of the required factors.

"(*d*) Mineral deposits of different grades, locations and probable dates of extraction in a mineral property shall be valued separately. The mineral content of a deposit should be determined in accordance with article 208 in the case of mines. . . . In estimating the average grade of the developed and prospective mineral, account should be taken of probable increases or decreases as indicated by the operating history. The rate of exhaustion of a mineral deposit should be determined with due regard to the limitations imposed by plant capacity, by the character of the deposit, by the ability to market the mineral product, by labor conditions, and by the operating program in force or definitely adopted at the basic date for future operations. The operating life of a mineral deposit is that number of years necessary for the exhaustion of both the developed and prospective mineral content at the rate determined as above. The operating cost comprises all current expense of producing, preparing and marketing the mineral product sold, exclusive of Federal income, war profits and excess profits taxes, allowable capital additions as defined in article 222 and deductions for depreciation and depletion, but including cost of repairs and replacements necessary to maintain the plant and equipment at its rated capacity and efficiency. This cost of repairs and replacements is not to be confused with the depreciation deduction by which the cost or value of plant and equipment is returned to the taxpayer free from tax. In general, no estimates of these factors will be approved by the Commissioner which are not supported by the operating experience of the property or which are derived from different and arbitrarily selected periods.

"(*e*) The product of the number of units of mineral recoverable in marketable form by the difference between the selling price and the operating cost per unit is the total expected operating profit. The value of each mineral deposit is then the total expected operating profit from that deposit reduced to a present value as of the basic date at the rate of interest commensurate with the risk for the operating life and further reduced by the value at the basic date of the depreciable assets and of the capital additions, if any, necessary to realize the profits."

The mineral values once having been established by valuation and accepted by the Treasury Department may not be altered by the taxpayer except in the case of discovery, which is in the case of bituminous coal, difficult to establish, or through a virtual change of ownership, as indicated by Article 207, which follows:

"Art. 207. Revaluation of mineral deposits not allowed.—No revaluation of a property whose value as of the basic date has been determined and approved will be allowed during the continuance of the ownership under which the value was so determined and approved, except in the case of discovery as defined in articles 219 and 220. The value of the basic date may, however, be corrected when a virtual change of ownership of part of the property results as the outcome of litigation and may be redistributed (*a*) when a revision of the number of units of mineral in the property has been made in accordance with articles 208, 209, or 211, and (*b*) in case of the sale of a part of the property, between the part sold and the part retained."

Instructions are given further for the determination of the mineral content of the mine, which are dealt with fully in the following paragraph.

"Art. 208. Determination of mineral contents of mine.—Every taxpayer claiming a deduction for depletion for a given year will be required to estimate or determine with respect to each separate property the total units (tons, pounds, ounces, or other measure) of mineral products reasonably known or on good evidence believed to have existed in the ground on the basic date, according to the method current in the industry and in the light of the most accurate reliable information obtainable. Preference shall be given in the selection of a unit of estimate to the principal unit (or units) paid for in the product marketed. The estimate of the recoverable units of the mineral products in the property for the purposes of valuation and depletion shall include as to both quantity and grade (*a*) the ores and minerals 'in sight,' 'blocked out,' 'developed,' or 'assured,' in the usual or conventional meaning of these terms in respect to the type of the deposit, and (*b*) 'probable' or 'prospective' ores and minerals (in the corresponding sense); that is, ores and minerals that are believed to exist on the basis of good evidence although not actually known to occur on the basis of existing development; but "probable" or "prospective" ores and minerals may be computed, for purposes of this valuation, (*c*) as to quantity, only in case they are extensions of known deposits or are new bodies or masses whose existence is indicated by geological or other evidence to a high degree of probability, and (*d*) as to grade, of such richness only as accords with the best indications available. If subsequent developments show a material error in the original estimate, a new estimate may be made and the capital remaining to be recovered distributed accordingly."

Full Cost Value

It naturally follows that when the full cost or value of materials has been recovered, no further charge-off should be allowed. This provision is dealt with in Article 210, which follows:

Art. 210. "Computation of deduction for depletion of mineral deposits.—(*a*) Depletion attaches to the annual production 'according to the peculiar conditions of each case' and when the depletion actually sustained, whether legally allowable or not, from the basic date, equals the cost or value on the basic date plus subsequent allowable capital additions, no further deduction for depletion will be allowed except in consequence of added value arising through discovery or purchase.

"(*b*) When the value of the property at the basic date has been determined, depletion for the taxable year shall be determined by dividing the value remaining for depletion by the number of units of mineral to which this value is applicable and by multiplying the unit value for depletion, so determined, by the number of units sold within the taxable year. In the selection of a unit for depletion preferences shall be given to the principal or customary unit or units paid for in the product sold."

The rights of the lessee to recover the cost of acquiring a leasehold or the value existing in leasehold rights at the time of purchase or at date of revaluation, March 1, 1913, are recognized and provision made in the laws of 1918 and 1920, but not in prior laws, to amortize them through proper depletion deductions as follows:

Art. 203. "Capital recoverable through depletion deductions in the case of lessee.—(*a*) In the case of a lessee, the capital remaining in any year recoverable through depletion and depreciation deductions is (1) the value as of the basic date of the lessee's equity in the property plus (2) subsequent allowable capital additions but minus (3) depletion and depreciation sustained, whether legally allowable or not, from the basic date to the taxable year. The capital recoverable through depletion is the total capital remaining less the sum recoverable through depreciation.

"(*b*) The value of the equities of lessor and lessee shall be computed separately, but, when determined as of the same basic date shall together never exceed the value at that date of the property in fee simple.

"(*c*) The value of a lessee's equity, if acquired prior to March 1, 1913, is the value of his interest in the mineral as of that date.

"(*d*) The value of a lessee's equity in a proven mineral property acquired on or after March 1, 1913, is its cost.

"(*e*) The value of a lessee's equity in a discovery on or after March 1, 1913, is the fair market value at date of discovery or within 30 days thereafter, of his equity in the mineral discovered."

The Accounting Procedure

In the case of mining property which has been revalued at date of March 1, 1913, for the purpose of depletion, it is desirable that the appreciation be set up on the books in a way which will permit the proper records for depletion based on cost and for the additional depletion due to the revaluation. To accomplish this an additional asset account should be set up on the books. Assuming the increase in value to be $100,000 the accounting procedure will be as follows:

	Dr.	*Cr.*
Property Revaluation 3/1/13..........	$100,000.00	
To Surplus from Revaluation at 3/1/13		$100,000.00

Assuming the exhaustion of mineral to be at the rate of $2,000 monthly, $1,000 being a portion of the original value and $1,000 a portion of the appreciation, the accounting entry will be as follows:

	Dr.	*Cr.*
Depletion	$2,000.00	
To Property Revaluation		$1,000.00
Depletion Reserve		$1,000.00

Or if preferred to not reduce the asset account credit will be to a Property Revaluation Reserve Account.

Since a depletion account, being part of the operating expense, will, through yearly closing entries, land in and reduce the surplus account, it is necessary that an additional entry be made to transfer the proper proportion from the special surplus from revaluation to the earned surplus account, the account entry being as follows:

	Dr.	*Cr.*
Surplus from Revaluation 3/1/13	$12,000.00	
To Earned Surplus		$12,000.00

It is important that this adjustment be properly made, since the realized appreciation from the revaluation at March 1, 1913, is not taxable and as long as taxes have not been fully determined under the Excess Profits Tax laws it is necessary that the earned surplus be adjusted through the transfer to it of all items which are proper, realized appreciation being one of them.

The same procedure will be necessary in the case of amortization of leasehold values, it being only necessary to properly designate the names of the accounts to indicate that the appreciation is one of leasehold value rather than of physical property.

CHAPTER X

AMORTIZATION OF LEASEHOLD VALUES

The question is frequently asked as to what benefit a lessee can obtain in connection with allowances covering the amortization of leasehold values in connection with his returns to the Internal Revenue Bureau.

Some leases have values aggregating very large amounts, and as a rule the lessees have failed to recognize this element of value or to claim anything by way of a deduction from income for the depletion or amortization of such leasehold values.

The difficulty has been to find some definite means of establishing the worth of such property.

If the owner of such a lease will take the trouble to prove his valuation he may frequently very materially decrease his taxable income through such deductions.

Valuation may be determined, in some instances, upon the basis of sales of contiguous property. In the case in which a taxpayer has a lease at a rate of royalty lower than the average of other properties similarly situated he may in many instances be able to have the Treasury Department recognize the value of this favorable differential based on the number of tons of coal remaining in the tract to be removed over a reasonable length of time, reduced to present worth.

For instance, A may have a tract of coal on which he has a lease calling for a royalty of 6 cents per ton. He may be surrounded by leaseholds in similar coal no better situated than is his in which the contract rate of royalty may be, for example, 7, 8, 10, 12 or 15 cents, an average of 10.4 cents per ton. It is only reasonable to assume that this advantageous lease has some value for the purpose of depletion, and if the case is properly presented to the Treasury Department such values will frequently be accepted.

The Internal Revenue laws prior to 1918 did not permit such a deduction for depletion. The law of 1918 and the present revenue law, however, provide that the appreciation of mineral lands to March 1, 1913, may be apportioned equitably between the lessor and the lessee.

In the case of leases taken up prior to March 1, 1913, it frequently happens that those which were held for a number of years had a very considerable value as measured by the difference between the amount of the royalty per ton at the time when the lease was made and the going rate of royalty at March 1, 1913. In this instance, this difference may be set up as an asset and recovered through proper deductions for depletion or more properly speaking, amortization of leasehold value.

While values must be placed upon the leasehold as at March 1, 1913, in the case of those companies whose history extends back of that time, the operating results prior to that date may be taken into consideration as showing the trend of earnings, and indeed, since no man can in the light of what he now knows to be true, project himself backward to a mental condition as of March 1, 1913, it necessarily follows that the results of operation since that date, eliminating of course the abnormal years of 1917 and 1918, and possibly even 1919 and 1920, may be taken into consideration in fixing a rate per ton of profit from the mining operation.

The years of life of such an operation based on past experience, may be reasonably estimated by any competent engineer, and the prospect for future production and margin of profit reasonably realizable can be estimated by past history also.

The prospective future returns from such mining operations reduced to a present worth at March 1, 1913, or at the date of acquisition of the lease if subsequent to that date may, if properly proven, be accepted by the Treasury Department as the leasehold value for the purpose of depletion, and in the case in which such leasehold were paid into the company in exchange for its capital stock and had a value greater than the amount of stock issued therefor, this additional value may, when approved by the Treasury Department be set up as additional invested capital arising through the medium of a paid-in surplus.

It may be pertinent in this matter to call attention of taxpayers to the regulations of the Treasury Department to the effect that the combined value to be allowed to the lessor and lessee must be equitably apportioned between them, and the position of the Treasury Department is that the combined allowance of the lessor and lessee shall not exceed the amount which would be allowed were the operator claiming for a value of fee coal.

In leases of long standing, due to the lapse of time and the appreciation in values, the value at March 1, 1913, per ton of mineral has frequently advanced beyond the amount per ton of the royalty and in such instances the lessor may possibly have no taxable income, but values must of course be proved to the satisfaction of the Internal Revenue Bureau.

Too frequently lessee operators claim no value for leaseholds because they have paid nothing for them, but particularly in the case of leases which have been running for a number of years it can frequently be definitely determined that they have a considerable value, which in some instances might be sold and in many instances, may at least be recognized by the Internal Revenue Bureau for the purpose of an adequate deduction from income, based on the depletion of the mineral.

The Questionnaire.—In order to standardize the proof which is required for the purpose not only of depletion of fee minerals, but also of leasehold values, the Treasury Department has prepared their questionnaire, Form E, which has been sent to most coal operators. This questionnaire gives the operator in reasonable detail an opportunity to report on the history of his company and to prove his values.

The table of cost, selling price and profits per ton at the end of the questionnaire provides a convenient medium for showing what have been the operating profits of the company during past years, eliminating, it will be noticed, all of the activities of the company not directly connected with the production and sale of coal.

To determine whether or not the filing of Form E is mandatory representatives of the Internal Revenue Bureau were interviewed and make the statement that if an operator expects to get any allowance for depletion, either of fee property or amortization of leasehold values, he will have to prove those values by filing Form E properly filled out with the Treasury Department.

Treasury Department Statement.—As to the use of the form in question, the following semi-official statement has been obtained from the Treasury Department:

"The questionnaire is designed to bring out certain information essential for the compilation of tax returns on coal properties so that a fair and accurate knowledge of the subject may be presented to the tax examiner. Such information is a basis for both 'taxation' and 'exemptions' therefrom.

"On page 1 (cover) the information required is for proper filing, enabling the case to be referred to, by the year, by its filing number, by the taxpayer's name, and by the location of the property. Thus any chance for confusion as to the identity of a property is avoided, and all data is readily referred to in the Government files.

"Page 2 contains valuable suggestions to the taxpayer, designed to assist him in making his returns, and should be given careful study before answering any part of the questionnaire."

The information called for on page 3 is designed to set forth a complete record of ownership of taxable property referred to, as well as to draw the attention of the examiner to any possible connection between this taxpayer and any other. In this manner any confusion that might arise from inter-relation between properties, or officers of properties, is avoided.

"Paragraph (4) History. The information under this heading should be used as a foundation for the case and sets up all the transfers of title that might have a bearing on claims for depletion or depreciation. This information, in connection with the description (5) that follows, should absolutely establish the identity and ownership of the property in question.

"6. Description of Coal relates to the coal found on the property, and is essential to an accurate estimate of the taxpayer's rights to claim depletion. The seam that is worked should be indicated.

"7. Description refers to the property and equipment rather than to the mineral in place, and is designed to set forth capacity and conditions of operation so that the conditions governing the mining of coal at this property may be fully understood. The table (page 6) included under this head is designed to set forth whether the coal is mined by the owner or not, and also sets forth his activities in any leaseholds, all of which information affects the depletion allowance.

"8. Purchase. The information called for under this head is necessary in setting up invested capital claims.

"9. Valuation. It is necessary that the taxpayer clearly set up a valuation of his property as a whole, in detail. Furthermore, the date at which this value applies should be clearly stated so that any appreciation or depreciation since that date may be estimated. The unexhausted tonnage referred to must only be figured for the seam or seams that are actually being worked, and should be separated. Other seams that may or may not be worked in the future should *not be included in this valuation,* but this should not preclude notation of them. It sometimes happens that a property is sold in the middle of a fiscal year, hence the necessity for filling out the data in paragraph (d), which should check with the returns received later from the purchaser.

On pages 9 and 10 the cost table based on a ton unit should be carefully filled in for each of the years of which records are available. All these figures are to be based on a ton per year unit (total yearly figure divided by total tons produced in that year). If any of the items are not known or not carried on the books, the space provided for this information should be checked off.

"To be of value this information should be prepared with the utmost accuracy and care, hence the sworn acknowledgment appearing on the last page.

FORM 34 —PRESENT WORTH OF EACH DOLLAR OF OPERATING PROFIT.

Accumulated during life of "n" years, assuming annual rate of production and operating profits per unit to be uniform and providing for interest on Present Worth at "r" per cent annually and a payment into a sinking fund which at four per cent, interest compounded annually, will amount to the Present Worth, i.e., provide for return of capital, at the end of life.

Yrs.	6 per cent	7 per cent	8 per cent	9 per cent	10 per cent	11 per cent	12 per cent
1	0.943396	0.934579	0.925925	0.917431	0.909090	0.900910	0.892857
2	0.908766	0.892946	0.876891	0.861777	0.847176	0.833062	0.819408
3	0.876389	0.853937	0.832607	0.812317	0.792993	0.774578	0.756976
4	0.846052	0.818370	0.792418	0.768072	0.745178	0.723608	0.703254
5	0.817570	0.785469	0.755780	0.728260	0.702675	0.678824	0.656540
6	0.790781	0.754961	0.722245	0.692177	0.664641	0.639166	0.615547
7	0.765540	0.726638	0.691435	0.659519	0.630410	0.603769	0.579284
8	0.741717	0.700174	0.663032	0.629635	0.599440	0.572008	0.546979
9	0.719198	0.675487	0.636765	0.602251	0.571286	0.543347	0.518017
10	0.697880	0.652354	0.612404	0.577066	0.545581	0.517355	0.491906
11	0.677672	0.630699	0.589748	0.553820	0.522019	0.493671	0.468244
12	0.658489	0.610277	0.568624	0.532281	0.500344	0.472001	0.446702
13	0.640258	0.591066	0.548887	0.512330	0.480337	0.452107	0.427009
14	0.622911	0.572950	0.530401	0.493737	0.461815	0.433770	0.408936
15	0.606385	0.555828	0.513053	0.476390	0.444619	0.416821	0.392292
16	0.590625	0.539630	0.496741	0.460167	0.428610	0.401104	0.376914
17	0.575581	0.524283	0.481376	0.443963	0.413671	0.386493	0.362663
18	0.561205	0.509716	0.466880	0.430685	0.399699	0.372873	0.349420
19	0.547455	0.496371	0.453178	0.417253	0.386603	0.360147	0.337082
20	0.534292	0.482719	0.440211	0.404592	0.374302	0.348230	0.325559
21	0.521680	0.470171	0.427920	0.392637	0.362729		
22	0.509587	0.458216	0.416255	0.381334	0.351818		
23	0.497979	0.446805	0.405166	0.370630	0.341517		
24	0.486835	0.435903	0.394619	0.360479	0.331775		
25	0.476122	0.425477	0.384571	0.350840	0.322549		
26	0.465820	0.415496	0.374988	0.341675	0.313799		
27	0.455905	0.405935	0.365839	0.332951	0.305488		
28	0.446356	0.396767	0.357096	0.324637	0.297587		
29	0.437155	0.387970	0.348734	0.316704	0.290063		
30	0.428283	0.379520	0.340726	0.309127	0.282893		
31	0.419724	0.371399	0.333054	0.301886			
32	0.411462	0.363589	0.325695				
33	0.403483	0.356072	0.318631				
34	0.395772	0.348832	0.311846				
35	0.388318	0.341856	0.305324				
36	0.381108	0.335128	0.299049				
37	0.374130	0.328637	0.293009				
38	0.367375	0.322371	0.287190				
39	0.360832	0.316318	0.281581				
40	0.354491	0.310468	0.276171				
41	0.348345	0.304811	0.270950				
42	0.342385	0.299339	0.265909				
43	0.336602	0.294043	0.261038				
44	0.330990	0.288913	0.256328				
45	0.325540	0.283945	0.251774				
46	0.320248	0.279128	0.247367				
47	0.315107	0.274459	0.243100				
48	0.310109	0.269929	0.238967				
49	0.305250	0.265533	0.234962				
50	0.300525	0.261266	0.231079				

FACTORS IN ABOVE TABLE =

$$\frac{Pn}{n} = \frac{1}{\dfrac{nr}{Rn - 1} + nr'}$$

Derived from Hoskold's Formula. Present value of \$1.00 per annum in n years, interest on capital being at one rate, r', and for redemption another rate, r, per cent. $\Bigg\}$ = Pn

$$Pn = \frac{1}{\dfrac{r}{Rn - 1} + r'}, \text{ where } R^n = (1 + r)\, n$$

FORM 35.—PRESENT VALUE OF $1.00 DUE IN YEARS HENCE AT THE FOLLOWING RATES PER CENT.

Yrs.	6 per cent	7 per cent	8 per cent	9 per cent	10 per cent	11 per cent	12 per cent
1	.943396	.934579	.925926	.917431	.909091	.900901	.892857
2	.889996	.873439	.857339	.841680	.826446	.811622	.797194
3	.839619	.816298	.793832	.772183	.751315	.731191	.711780
4	.792095	.762895	.735030	.708425	.683013	.658731	.635518
5	.747258	.712886	.680583	.649931	.620921	.593451	.567427
6	.704961	.666342	.630170	.596267	.564474	.534641	.506631
7	.665057	.622749	.583490	.547034	.513158	.481658	.452349
8	.627412	.582009	.540269	.501866	.466507	.433926	.403883
9	.591898	.543934	.500249	.460428	.424098	.390925	.360610
10	.558395	.508349	.463193	.422411	.385543	.352184	.321973
11	.526788	.475093	.428883	.387533	.350494	.317283	.287476
12	.496969	.444012	.397114	.355535	.318631	.285841	.256675
13	.468839	.414964	.367698	.326179	.289664	.257514	.229174
14	.442301	.387817	.340461	.299246	.263331	.231995	.204620
15	.417265	.362446	.315242	.274538	.239392	.209004	.182696
16	.393646	.338735	.291890	.251870	.217629	.188292	.163122
17	.371364	.316574	.270269	.231073	.197845	.169633	.145644
18	.350344	.295864	.250249	.211994	.179859	.152822	.130039
19	.330513	.276508	.231712	.194490	.163508	.137678	.116107
20	.311805	.258419	.214548	.178431	.148644	.124034	.103667
21	.294155	.241513	.198656	.163698	.135130	.111742	.092560
22	.277505	.225713	.183941	.150182	.122846	.100669	.082642
23	.261797	.210947	.170315	.137781	.111678	.090692	.073788
24	.246979	.197147	.157699	.126405	.101526	.081705	.065882
25	.232999	.184249	.146018	.115968	.092296	.073608	.058823
26	.219810	.172195	.135202	.106393	.083905	.066313	.052521
27	.207367	.160930	.125187	.097608	.076278	.059742	.046893
28	.195630	.150402	.115914	.089548	.069343	.053822	.041869
29	.184557	.140563	.107328	.082154	.063039	.048488	.037383
30	.174110	.131367	.099377	.075371	.057308	.043683	.033378
31	.164255	.122773	.092016	.069148	.052099	.039354	.029802
32	.154957	.114741	.058200	.063438	.047362	.035454	.026609
33	.146182	.107235	.078889	.058200	.043057	.031940	.023758
34	.137912	.100219	.073045	.053395	.039142	.028775	.021212
35	.130105	.093663	.067635	.048986	.035584	.025924	.018939
36	.122741	.087535	.062625	.044941	.032349	.023355	.016910
37	.115793	.081809	.057986	.041231	.029408	.021040	.015098
38	.109239	.076457	.053690	.037826	.026735	.018955	.013481
39	.103056	.071455	.049713	.034703	.024304	.017077	.012036
40	.097222	.066780	.046031	.031838	.022095	.015384	.010747
41	.091719	.062412	.042621	.029209	.020086	.013860	.009595
42	.086527	.058329	.039464	.026797	.018260	.012486	.008567
43	.081630	.054513	.036541	.024584	.016600	.011249	.007649
44	.077009	.050946	.033834	.022555	.015091	.010134	.006830
45	.072650	.047613	.031328	.020692	.013719	.009130	.006098
46	.068538	.044499	.029007	.018984	.012472	.008225	.005445
47	.064658	.041587	.026859	.017416	.011338	.007410	.004861
48	.060998	.038867	.024869	.015078	.010307	.006677	.004340
49	.057546	.036324	.023027	.014659	.009370	.006014	.003875
50	.054288	.033948	.021321	.013449	.008518	.005418	.003460

"It must be borne in mind that inaccuracies and absence of information on this return, works to the disadvantage of the taxpayer by depriving him of his argument for seeking exemptions.

"This questionnaire has been reduced to the utmost minimum and deals only with information absolutely necessary, duplication being eliminated. A frank and clean-cut presentation of the facts will in every case hasten the results desired, and if so presented will reduce the expense of handling tax matters, both to the taxpayer and the Government."

Table Used by the Internal Revenue Bureau to Determine Fair Market Value at March 1, 1913

As has been heretofore shown, the Treasury Department requires very detailed information in connection with the fixing of values for depletion of owned mineral and the amortization of leasehold values. Forms 34 and 35, printed on pages 112 and 113, are used by them in arriving at the present-value of eventual-earnings.

Leaseholds from the Standpoint of the State for the Purpose of Taxation.—In recent years the various states have found that the taxing of mining leases is a good source of adding to their revenues, and a number of coal producing states have made coal leases subject to such a tax. In this connection it may be of value to examine the practise of one of the states in question in arriving at values for this purpose. Instructions issued by Walter S. Hallanan, Tax Commissioner of West Virginia, to local assessors are of interest since they contain a decision of the supreme court of that state which goes into the subject in considerable detail.

The Tax Commissioner's instructions follow:

Coal Leaseholds or Chattels Real

"To arrive at the proper value of a coal lease will in many instances be quite difficult, but with the proper investigation and with the information that can be derived from the owner of the lease and others, an equitable and fair valuation for taxation can be obtained. In the first place it will be necessary to know the terms of the lease, which you can get from the owners of the leasehold or at the county clerk's office from the records; also the rentals or royalties to be paid, the life of the lease, the size of the vein and quality of the coal, the facilities for output, and the capacity of the mine; the character, kinds and extent of the improvements and the adaptability to the purpose for which they are used."

Supreme Court Illustrates.—The Supreme Court in the case of *Dillon vs Bare and Carter,* 63 W. Va. 483, gives the following splendid illustration as to how to arrive at the valuation of a coal leasehold:

"All coal leases on producing mines yield a royalty to the lessor. These royalties vary in amount from 5 as high as 10 cents per ton, and perhaps more in some cases. If a lease is paying as royalty such an amount that neither he nor anybody else could afford to work the mine and to pay a larger royalty, it is obvious that he could not sell his right of user in the market for any considerable amount of money. But if his royalty is low enough to enable him to work the mine at a good profit, he could sell it for something, if he desired to go out of business, and his lease were assignable, or if it were not assignable without the consent of the lessor, and that consent could be obtained.

"Or if the royalty were low enough so that the lessee can make, not only a reasonable profit to himself by working the mine, but could also pay a much larger royalty and still work the mine profitably, then his right of user would command a good price in the market. If, for instance, he pays royalties amounting to $6,000 a year at 5 cents a ton and could afford to double that royalty and still work the mine profitably, there is an advantage in the lease to him of $6,000 a year in addition to his reasonable profits, arising from the operation of the mines. If that $6,000 be regarded as the equivalent of the income from a sum of money invested at 6 per cent, amounting to $100,000, and the deposit of coal were unlimited and inexhaustible, the market value of that lease, the mere right of user, would be at least $100,000 and it ought to be taxed upon that much."

In valuing coal property, the assessor might find it a good idea to reach the value of the whole plant; that is, each coal producing plant could be treated as a going concern, an organic working whole. These are the methods commonly employed in arriving at the value of the property for commercial purposes or taxation.

Property for purposes of taxation is worth just as much as it is for purposes of income and sale. Whatever value a coal plant would bring if offered for sale upon such terms as such property is usually sold, it is worth for purposes of taxation. Now, when you arrive at the value of a plant as a whole it is an easy matter to apportion this value between the lessor and lessee if the plant is operated on leased premises.

Suppose for example that Richard Roe owns two tracts of coal land of 1,000 acres, worth approximately $100 an acre. One of these tracts he leases to John Doe at, say a royalty of 10 cents per ton, and the other he operates himself. In the first case there is a leasehold to value while in the second case there is none. The coal plants and improvements for the purpose of mining coal upon these two tracts are of the same value, approximately. Richard Roe spends $300,000 in the development of his thousand acres. John Doe, to whom he leased the other thousand acres, spends $300,000 in the development of his leasehold. The result is, they both have good mines of equal value in the market.

The assessor comes to Richard Roe to assess his real estate. He finds that the 1,000 acres from which he is mining coal, upon which he owns the improvements and upon which he has spent $300,000, is a valuable plant, a money-making concern, and can be sold in the market, as a going concern, as a commercial proposition, that is, the 1,000 acres of land, improvements and all, for $700,000. This is the market value of the 1,000 acres owned and operated by Richard Roe and he has no right to complain. The valuation of $100,000 is therefore assessed as real estate and entered upon the land book in the name of Richard Roe and is apportioned as land and improvements.

But how about the other 1,000 acres which has been leased to John Doe? By investigation the assessor ascertained that this thousand acres is under lease for coal-mining purposes. He also ascertains by investigation that the two plants are alike in every respect, except one tract is leased and the other is not. The assessor also finds that the total value of the plant located upon the land leased by Richard Roe to John Doe, including land, improvements, etc., is $700,000; that the average royalty received from the leased tract by the owner, Richard Roe, at 10 cents per ton is $20,000 annually; that the land is of no value except for coal purposes; that he derives no income from same except the royalty on the coal.

Richard Roe informs the assessor that on account of the fact that the constant mining of coal will soon destroy and render the entire tract of land worthless, that no investor would buy the coal land, encumbered by the lease, as it is, unless he could make a profit of at least 10 per cent, and that the top-notch price the leased land would bring in the market is $200 per acre, and that the $20,000 royalty would give the investor 10 per cent upon his investment, and the land has a prospective life of, say, thirty years.

The assessor, upon this information, assesses Richard Roe with the 1,000 acres of leased land upon the land books at $200,000, or $200 an acre, the value which it properly has from the standpoint of an investment, and the price at which it could be sold in the market. Richard Roe has then been assessed with all the property he has.

He then goes to John Doe, who is the owner of the leasehold on Richard Roe's 1,000 acres of land. He finds that it cost John Doe $300,000 to install the plant and get ready to ship coal; he has already found, however, that the entire value of the plant, land, improvements, and everything is $700,000. He has also found $200,000, or $200 an acre, to be the value of the land and has assessed that to Richard Roe, the land owner. He finds $300,000 in improvements or fixtures attached to the land but not included in the valuation thereof, assesses them to John

Doe as personal property and enters the amount in the personal property book in column "P." See Sec. 61, Chap. 29, Code; also *Carter vs Tyler County,* 45 W. Va. 806. There is $200,000 remaining which should be assessed as the value of the leasehold to John Doe as personal property and entered in the personal property book in column "PP."

Thus we have the two tracts of land; one leased and the other not, both of equal value, equally and fairly assessed, without any discrimination whatever, against the owner of the leasehold. The two plants are of equal value and they are equally assessed. By finding the aggregate value of a plant, as a whole, and then apportioning the valuations between the land owner and the owner of the leasehold, as they should be, no injustice will be done any interest.

In assessing coal property it is vastly better to proceed upon the unit theory, find the value of a plant as a whole where this can be done, and then distribute the property upon the land and personal property books.

CHAPTER XI

DEPRECIATION

Depreciation is the loss in the value of an asset through the effect of use, time, or obsolescence, and the depreciation account attempts to measure in dollars and cents the loss of value. In an operating plant this loss is due primarily to use, and even when a property is idle depreciation continues through rust and decay. In the case of coal mines, depreciation of plant and equipment keeps step with the exhaustion of the coal, for when the mineral has been exhausted or the right to mine has elapsed through the passage of time, the plant and equipment have little or no value and the development is lost.

In the report of the Cost Accounting Committee of the National Coal Association, the following remarks are pertinent to coal mines:

"Capital investment in a coal mine is not a permanent asset; it is only an outlay preliminary to the extraction of the coal; it is merely an advanced or deferred charge upon future income, which capital, if recovered, must be recovered with the current expenses of operation out of the proceeds of coal sold.

"By dividing the cost of the mine by the total number of tons practically recoverable through present shafts and openings, the rate per ton necessary to redeem such cost will be found.

"In Coal Mining the exact unit for the measurement of work done is the ton of coal mined. It is also the exact unit for measuring depletion of mineral, wear and tear from use of equipment, and exhaustion of development. Development is a mere easement, the value of which disappears when the coal is gone.

"A coal mine being, as emphasized, made up of several elements, all depreciating as the coal is mined, such depreciation is composite, accruing at a rate concurrent with the rate of extraction. The necessary rate per ton being determined, the aggregate depreciation for any accounting period should, of course, as far as practical, be distributed among the various elements in proportion to their respective costs or value.

"The doctrine that measures depreciation of coal mine plant and equipment in terms of time (excepting, of course, some leasehold propositions) is fallacious, as tested by the further assertion that a completely equipped mine could be maintained indefinitely without depletion or wear and tear if no coal were mined, by minor repairs.

"Therefore, we insist, as a general rule—excepting some leaseholds—that the correct measure of the depletion and depreciation experienced in mining coal is the ton of coal mined.

"After a coal mine has been developed and equipped to its planned output capacity, charges to its Capital Account should cease, and thereafter there will be few if any permissible charges to that account."

The question of the adequacy of a rate per cent which will make good accrued appreciation and keep step with accruing depreciation, is a very difficult one, particularly when applied to the mining industry, but under no sound accounting practice can provision for such losses be omitted. Indeed, the English courts have held that provision must be made for any assets lost or wasted in the process of earning profits, whether they are fixed or circulating, and in the case of *Bond vs Barrow Hematite Co.* have held that an amount expended in mines, blast furnaces and cottages which were afterwards abandoned, must be regarded as circulating capital and made good before dividends could be paid out of surplus.

It should be made a rule from the beginning of an operation that depreciation shall be fixed at a rate which, during the life of the coal, will certainly return the capital invested, and this rate, whether a percentage or a rate per ton, having been determined, should be adhered to strictly, unless conditions arise which will warrant a departure from the established practice, either through additions to plant; through the finding of areas barren of mineral resulting in an increased rate per ton, or by the addition of acreage to be removed through the same openings, resulting in a decreased rate per ton. In this connection the regulations of the Internal Revenue Bureau, which permit depreciation to be figured either on a percentage basis or on a per ton basis, are quite interesting and specific and for information are reproduced below:

Reference, 1918 Law Regulations 45.

"ART. 224. (*a*) The Act provides that deductions for depreciation of improvements 'according to the peculiar conditions in each case' may be taken by a taxpayer owning or leasing mining property. This is deemed to include exhaustion and wear and tear of the property used in mining of deposits, comprising a reasonable allowance for obsolescence.

"(*b*) It shall be optional with the taxpayer, subject to the approval of the Commissioner, (1) whether the value of the mining property plus allowable capital additions but minus estimated salvage value shall be recovered at a rate established by current exhaustion of mineral, or (2) whether the value of the mineral deposit on the basic date plus allowable capital additions shall be recovered through depletion and the cost of plant and equipment less the estimated salvage value shall be recovered by reasonable charges for depreciation at the rate determined by its physical life or its economic life or, according to the peculiar conditions of the case, by a method satisfactory to the Commissioner.

"(*c*) The estimated physical life of a plant or unit thereof (including buildings, machinery, apparatus, roads, railroads, and other equipment and improvements whose principal use is in connection with the mining or treatment or other necessary handling of mineral products) may be defined as the estimated time such plant, or unit, when given proper care and repair can be continued in use despite physical deterioration, decay, wear, and tear.

"(*d*) The estimated economic life of a plant or unit thereof is the estimated time during which the plant or unit may be utilized effectively and economically for its intended purposes and may be limited by the life of the property or of that portion of the mineral deposits which it serves but can never exceed the physical life.

"(*e*) Any difference between the salvage value of plant and equipment and the sum remaining to be recovered through depreciation at the termination of mining operations shall be returned as profit or loss in the year in which it is realized.

"(*f*) Nothing in these regulations shall be interpreted as meaning that the value of a mining plant and equipment may be reduced by depreciation deductions to a sum below the value of the salvage when the property shall have become obsolete or shall have been abandoned for the purpose of mining. In estimating the salvage value of the equipment at the end of its estimated economic life due consideration may be given to its specialized character and the cost of dismounting and dismantling and transporting it to market.

"(*g*) Nothing in these regulations shall be interpreted to permit expenditures charged to expense in any taxable year or any part of the value of land for purposes other than mining to be recovered through depletion or depreciation."

It has too frequently been the custom in past years in many lines of industry to use a high depreciation rate in years of prosperity and to lower the depreciation rate in hard times. This is neither just nor scientific and the method is not permitted by the Internal Revenue Bureau. Failure to recognize the fact of accruing and accrued depreciation in years prior to the incidence of the Income Tax Law led many taxpayers into difficulties with the Treasury Department. This was particularly true with corporations, where, in order that the invested capital on Jan. 1, 1917, might be determined, the Treasury Department insisted upon an adequate rate of depreciation being applied to the operation of the plant during its years of existence prior to that date, which, because of the fact that depreciation had not been properly taken into consideration, when set up under the instructions of the Internal Revenue Bureau, frequently resulted in practically wiping out any surplus then existing upon the books.

The fact that property may be revalued at March 1, 1913, for the purpose of depreciation, as well as for the purpose of depletion, has not been as clearly understood by taxpayers as it might be. Recently the Treasury Department recognized the injustice of its former position and in a statement by the Committee of Appeals and Review, signed by N. T. Johnson, Chairman, and dated July 16, 1921, after being noted by Carl A. Mapes, Solicitor of Internal Revenue, recognition is given to the fact that depreciation and obsolescence may be arrested through the keeping up of the plant by adequate repairs. This is indicated by the following quotations from the memorandum referred to, and while the application is directed to the question of invested capital, it follows that if values exist in the physical asset due to its having been kept up to a high productive value, necessarily the life of that asset is extended and the rate of depreciation will be correspondingly reduced.

"It follows that any action on the part of a particular taxpayer which extends the useful life of a depreciable asset beyond the normal or usual term, and any circumstance which serves to increase the salvage value of a depreciable asset, operates to justify a reduction in the normal rate of depreciation. The depreciation of an asset is arrested where it is maintained at a high standard of efficiency either by the exercise of unusual care in its use or by unusual maintenance expenditures.

"Invested capital, as defined in the Excess Profits Tax Law, is a statutory concept and is composed of two elements: (a) original contribution and (b) earnings of the corporation available for distribution but not distributed and not dissipated by subsequent operating losses.

"The exhaustion of this capital through use, wear and tear has, for the purpose of computing invested capital, the same effect as an operating loss and unless this loss is property taken care of out of earnings in one way or another, earned surplus must be adjusted in accordance with the provisions of the regulations.

"There are two ways of taking care of this loss out of income. One is by charging ordinary repairs directly to expense and setting up a depreciation reserve against which are properly chargeable all renewals and replacements; the other is where renewals and replacements, as well as repairs, have been charged directly against gross income. Either way has the effect of reducing the amount added during the year to earned surplus.

"Consequently, the mere fact that no depreciation, or a minimum depreciation, has been charged as such, is not sufficient reason for reducing the earned surplus, where renewals and replacements sufficient to care for the decrease in value of capital assets have been charged directly to expense, or where for any of the other reasons hereinbefore suggested less than the normal rate of depreciation is properly chargeable. When a taxpayer makes this claim there are two methods of verifying it. One is by determining the plant efficiency and the other is by determining the value of the capital assets remaining. From an administrative standpoint the latter is probably more practical even though it may be said that the former is more accurate.

"Many cases have been brought to the attention of the Committee where corporations have been in existence for a long period of years, some of which corporations have been in existence several times the ordinary estimated life of the depreciable assets, and yet those assets are to-day in first-class condition and worth the figure at which they are carried on the books, although no depreciation has been charged as such and no additions to capital account have been made. In such cases it is obvious that depreciation has been adequately cared for by charges to expense, although it frequently happens that it is impossible at this late date to segregate and specify such charges and there is no warrant in the law or the regulations for requiring the depreciable assets in such cases to be written down below the figure at which they are carried on the books, since to do so is to reduce earned surplus twice, once through the original charge to expense (whether proper or improper), and again through an arbitrary depreciation charge required by the Bureau to be set up against earned surplus for the purpose of computing invested capital.

"The controlling rule in this matter is found in that part of Article 839 of Regulations 45, which reads: 'Adjustments in respect of depreciation or depletion in prior years will be made or permitted only upon the basis of affirmative evidence that as at the beginning of the taxable year the amount of depreciation or depletion written off in prior years was insufficient or excessive, as the case may be.' *Mere failure in prior years to have written off on the books the maximum or ordinary rate of depreciation, is not in itself affirmative evidence.'* There is no warrant for reducing earned surplus because of alleged failure to charge off sufficient depreciation in the past, unless the depreciable assets of the corporation are valued on its books at the beginning of the taxable year at an amount in excess of their sound value at that time."

Much of the difficulty in setting up depreciation adequate to return the capital invested would have been eliminated had the practice of figuring depreciation in coal mines upon the basis of exhaustion been more generally in use. Frequent disagreements appear in all discussions as to the useful life of any class of equipment and these discussions could always have been avoided by letting each ton of coal possible to produce bear a proportionate share of the value of the plant.

The Government has recognized the effect of overtime production on depreciation. The question of overtime is not a prominent one in the bituminous coal industry, but since the average number of working days in the bituminous coal industry has never been anything near like the number of possible calendar working days in the year, the days of operation, averaging almost full time during the war years, amounted in fact to a condition resembling the overtime feature of other industries and many operators doubtless found the ordinary percentage rate of depreciation too low. In the cases, however, where depreciation was figured on a per ton basis, the volume of depreciation automatically kept step with the volume of coal exhaustion.

Taking all of these conditions into consideration, the following formula for figuring depreciation in the coal mine may generally be recommended.

Divide the amount of capital invested in the plant and equipment (including development unless that has been added to the mineral value, to be covered by depletion charges) by the estimated number of tons which it will be commercially possible to mine, and charge Operating Account monthly with an amount based upon such rate per ton multiplied by the number of tons mined, with credit to Depreciation Reserve account.

As the investment account may be increased from year to year by charges for new installations which substantially increase the capacity of the mine or substantially reduce its operating cost, or decreased by credit for units demolished, sold or scrapped, the rate may be changed from year to year so as to provide fairly for the complete extinguishment of the investment account during the period of the mine's operation. The scrap value of the few remaining units at the end of such period is negligible in computation of the depreciation rate.

When units are demolished, sold or scrapped, the books value (to be ascertained by taking the original cost and deducting therefrom such portion of Depreciation Reserve account as the cost of the unit bears to the total of the investment account at that time) less the amount realized for the units will be chargeable to Operating Account as Additional Depreciation.

It will be noted that the regulations of the Treasury Department permit the option on the part of the taxpayer, of figuring depreciation on the basis of depletion or the exhaustion of mineral, or of calculating it on a rate per cent. In the opinion of the writer the former is preferable because practically all element of guess is eliminated, for if the rate per ton is properly established the investment will certainly be redeemed ton for ton, with the removal of the mineral. Objection has been made to this method on the grounds that the additions to the plant account from year to year will cause a higher rate of depreciation in the latter years of the operation. The answer to this objection is that the items of equipment which should be capitalized in these latter years are properly very few, since a proper accounting practice would dictate that all expenditures made for minor items of equipment such as motors, mine cars, rail, copper wire, etc., necessary to maintain but not to increase production should be treated as items of expense. Of course, if the equipment so installed is such that the production is increased it should be capitalized with a consequent increase in the monthly charge for depreciation under either method of calculation, which would be brought about by a higher rate per ton if figured on the basis of depletion, or an additional value for depreciation if the basis is a rate per cent.

For the benefit of those who prefer the percentage method the following tables of rates, applicable to coal mining properties, which are commonly used by the Treasury Department are reproduced.

FORM 36.—DEPRECIATION TABLE.

COAL MINES.

Kinds of Equipment	Mining Section, based on physical condition No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
Tipple (Frame, Steel)	Life of Property					
Head Frame	Life of Property					
Power Plant	7	7	7	7	7	7
Pumps	5	10	7	5	7	7
Motors	10	10	10	10	10	10
Mine Cars	4	4	4	4	4	4
Mules, Horses	4	4	4	4	4	4
Cables and Haulage	2	2	2	2	2	2
Electric Equipment	7	10	7	5	10	7
Houses (Brick, Concrete, Frame)	Life of Property					
Mining Machines	7	8	7	5	8	8
Hand Tools	1	1	1	1	1	1
Timbers	Life of Property		6	6	6	10
Rails	5	10	8	5	10	10
Wire and Trolleys	7	10	7	5	10	7
Locomotives	10	10	10	10	10	10
Bee Hive Ovens		10	10	10	10	10
By Product Ovens		12	15	15	15	15
Washeries	Life of Property					

No. 1 Anthracite; No. 2 Pa. (Bituminous), W. Va., Ill; No. 3 Ky., Tenn., Ga., Ohio, Ind.; No. 4 Mo., Kans., Iowa, Ark., Okla., Ala.; No. 5 Texas, N. and S. Dakota; No. 6 Wy., Mont., Colo., N. M., Utah and Wash.

Form 37.—Table of Depreciation Values

(COAL MINES AND EQUIPMENT)

Bituminous Mines Pennsylvania, West Virginia, Illinois	Term of Life Years	Shortest Life Known	Average Life	Rate of Yearly Depreciation
Magazine	10	——	10	10
Wash-house	10-20	——	20	5
Barn-surface	15	——	15	6 2/3
Barn-mine	20	——	20	5
Conveyor belts	3-10	——	14	25
Hoisting shaft	——	——	L of M	——
Cage, self-dump	3- 6	2	5	20
fixed	5-12	——	8	12 1/2
Air shaft cage	10	——	10	10
headframe	10	——	10	10
hoist	10	——	10	10
stairway	10	——	10	10
Car lift	10	——	10	10
Chain haul	7	2	7	15
Automatic cager	7	——	7	15
Underground repair shop equipment	15	——	15	6 2/3
Mining machines:				
Puncher	4-20	——	8	15
Chain	4-18	——	8	12 1/2
				$58-$602
Mine cars	3- 8	——	5	7¢ per ton
electric	7-35	——	15	6-$251-$448
Mine tracks:				
Mule roads	12	——	12	8 1/3
Main entries	16-20	——	15	6 2/3
Cross entries	10-20	——	15	6 2/3
Room and panel	10	——	10	10
Stoppings:				
Wood	4	——	4	25
Brick or concrete	15-30	——	25	4
Overcasts	15-30	——	25	4
Mules or horses	——	——	4	——
Ventilating doors	——	——	2	——
Telephones	——	——	6	——
Fire appliances	——	——	10	——

CHAPTER XII

INSURANCE AND TAXES

Insurance and Taxes.—The fire insurance account includes the amount paid for insurance upon the operating plant, including improvements, machinery and equipment, the dwellings and any other property around a mine which can be covered by fire insurance. There should be no argument needed to convince the operator that he should carry an amount of insurance which is adequate to protect, as nearly as may be under the rules of the insurance companies, the replacement value of his property as of the present date. Unfortunately, because of the lack of adequate fire protection, most of the insurance policies are so written as to require the insured to be a co-insurer for a considerable portion of the value, usually running as high as 25 per cent.

Because of the high cost of fire insurance, it not infrequently happens that the operator carries a smaller amount than is adequate to protect himself thoroughly. The laws of most states require the insurance companies to be authorized to do business within that state and in some cases they are specific as to the rates which may be charged. Where this is not true, the underwriters' associations usually take care of the same thing and the result is that as far as rates are concerned, there is little chance for discrimination as between operators with like conditions.

Not a little money, however, may be saved through having competent fire insurance engineers, or the people connected with the rate bureaus of the various underwriters' associations, examine the property from time to time and make recommendations as to what fire hazards may be removed in order to obtain reduced rates. Frequently these are not at all expensive and the reduction in rate will more than pay in a single year for the expense of making alterations in buildings or the providing of portable fire extinguishers recommended.

Careful consideration should be given at the time of placing orders for fire insurance that items which are of a nature which would prevent their being destroyed by fire be eliminated from the values insured. These are such things as stone and concrete foundations of the power-house, boiler rooms, etc., the heavy foundations of fixed machinery, which would at most be damaged but not destroyed and in some cases the walls and covering of steam boilers, etc. The fact is not as generally known as it should be among those buying fire insurance, that the contents of a building on mine property always takes the same rate as the building itself.

In the placing of fire insurance on a number of plants or on the various items of each plant, considerable money sometimes can be saved by placing blanket insurance, in which case the rate is figured as an average by rating each building at its own value and obtaining an average thereby.

In the case of these blanket policies, from the accounting standpoint, it is important that subdivision be made so that the cost of insurance for units in the operating plant may be kept separate from the value of houses, stocks of merchandise, etc.

This is usually easy of accomplishment because of the fact that while it is possible in most states to insure miners' dwellings for a three or five year period at a reduced rate, insurance of the operating plant proper is usually placed for a single year and it becomes advantageous to place separate policies on these different properties. The cost of the premium on the operating plant is, of course, a proper charge to cost. The cost of the insurance of miners' houses is a portion of the cost, provided the miners' dwellings are so treated in the accounting. The insurance on stocks of merchandise should, of course, be kept separate.

The insurance premium being, as a rule, payable in advance, or in periods spread over a year or more, the charge at the time of payment should be made to an account designated "Insurance Paid in Advance." This account should be credited monthly with a proportionate part of the insurance premium and a charge made to "Insurance" as an item of cost. In the case of insurance on miners' dwellings, the charge is to an account called "Insurance on Miners' Dwellings," or it may be preferred to make this charge direct to a general account, "Miners' House Repairs and Expenses," but under any circumstances the separation should be thus made, for the failure to charge all of the expenses against the miners' houses has had in the past a tendency to mislead many people as to the investment value of these houses in connection with a mining plant and to assume that they brought in a net revenue when such supposed revenue was produced only by the failure to properly charge dwellings with a portion of insurance, taxes, etc.

Any one who has been called upon to reach a settlement with an adjuster of the fire insurance companies cannot have failed to be impressed with the absolute necessity of having proper inventories and of having the items on such inventories allocated with respect to the buildings in which the various equipment or supplies may be located.

In the adjustment of such fire losses there is usually a difference between the book value of the property destroyed and the amount received in settlement. This item if a loss, of course, should not be charged direct to cost but should be treated as a separate item, and under the rules of the Internal Revenue Bureau is properly deductible as expense in making an income tax statement. In the case of some property the reverse may be true and, due to the fact that the book value of the property destroyed may have been reduced by charges for depreciation below its replacement value, which is the basis upon which such settlements are usually made, a book profit may be shown through such a fire loss settlement.

This has been true in recent years with respect to miners' houses which may have been constructed from material cut from the property, for which an adequate value was never set up in the inventory. Under conditions such as these it is hard to convince any one that this is an item on which a profit has accrued during the current year and it has been the practice of some operators to credit such an item to the Depreciation Reserve account in order to offset the inadequate depreciation which may have been set up on other items. Not infrequently the value at March 1, 1913, has been underestimated in such cases.

Liability Insurance.—The liability insurance account should cover the cost of carrying insurance against personal injuries to employees or others due to accidents in and around the mines. The accounting may be one of several kinds, namely, where the insurance is purchased from a liability insurance company, where under state laws it is paid to workmen's compensation funds of the states, or where it may be carried as a fund by the operator himself or through mutual agreement with other operators.

In the case of purchased liability insurance, if it is paid for in advance the accounting practice will be similar to that for fire insurance. In most cases, however, the amount of the premium is based upon the earnings of the employee and settled for monthly, under which condition the amount of the premium becomes a proper direct charge to operation.

In the case of workmen's compensation payments required by state laws, the basis may be fixed upon the experience of the preceding year or some other period, and the monthly proportion may thus become a direct charge to operation also.

In instances in which a company carries its own insurance fund, the credit is to a "Liability Insurance Fund Reserve," with the corresponding charge to "Insurance —Liability." The amounts paid for personal injuries are charged to the reserve fund.

The amounts paid to liability insurance commissions in accordance with state compensation laws are properly deductible as necessary expenses of doing business, in connection with the federal income tax laws, the amounts being charged monthly into cost. In the case of those companies who maintain their own insurance through a reserve fund, such monthly charges are not proper deductions under the rulings of the Internal Revenue Bureau for that purpose. In this case only the actual amounts of money expended in settlement of personal injury claims may be so deducted.

There is still another class of insurance which, under certain conditions, may be a proper charge to the cost of operation, namely, the insurance which is carried by some companies upon the lives of its officers or executives. If the stipulations of the policies are such that no portion of the policy may accrue to the person insured or to his relatives, but the value be paid to the company itself, the cost of carrying such insurance is a proper deduction as a part of the cost of doing business and may be so handled in reports to the Internal Revenue Bureau.

Taxes.—Taxes are the amounts paid to federal, state and municipal governments, either on income, for purposes of local benefit, or for the privilege of doing business. For the purposes of cost accounting, they are of two classes, those which are deductible from the income tax and those which are charges against earnings. The latter are, generally speaking, federal income and excess profits taxes.

The monthly accounting for taxes is under the best conditions usually somewhat of an estimate, but in making these estimates it is desirable that too much rather than too little be set up as a monthly charge. These are estimates because of the fact that generally the amount, particularly in the case of state and county taxes, cannot be determined until a portion of the fiscal year has elapsed; and since each month's production should bear its proper proportion of the taxes as they accrue, it is necessary to make an estimate of the amount of tax which will accrue within a taxable year.

This usually can best be done by comparison with the taxes of the preceding taxable period until such a time as the tax authorities settle upon a rate and a valuation, which will make the estimate a certainty. For that reason a fund or reserve account should be set up to take care of taxes. To this account, "Reserve for Taxes," should be credited monthly the amount of taxes accrued and a corresponding charge made to "Taxes" as a portion of the cost of operation.

The federal capital stock tax is payable in advance June 30 of each year, and strict accounting practice would provide that when paid it should be set up on the books as "Taxes Paid in Advance" and a proportionate charge made to cost monthly to wipe out the account within the twelve months period.

Taxes such as those for pavement of streets, the laying of sewers, etc., usually known as those for local benefits, are, as a rule, items which in most cases may be capitalized. Taxes of this nature are not frequent in connection with the mining industry, unless they be for improvements of this nature in towns where the offices are maintained.

Taxes on undeveloped coal land, while deductible for income tax purposes, are not a proper charge against the cost of operation. In some cases such charges may be made against the value of the real estate, and whether so treated or charged as items of expense are properly deductible in the making of federal tax returns, since the law provides for the deduction of all such taxes paid or accrued. Where so handled in the past few years, it has been necessary to adjust the surplus in the rendering of tax returns; but with the passing of the excess profits tax on Dec. 31, 1921, this accounting procedure has again become simplified.

Income and excess profits taxes under the federal law are not a proper charge to cost and are not deductible in ascertaining net profit for the purpose of federal tax reports, but are properly chargeable against income.

CHAPTER XIII

GENERAL EXPENSES

General Expenses.—The general or administrative expenses in connection with coal mine operating consist of officers' salaries, salaries of the office and administrative forces, rent and miscellaneous office expenses and legal expenses. These items, in case of the operation of more than one mine, should be distributed among the mines on some equitable basis. In arriving at the amounts to be charged to general expense it is necessary also to bear in mind that some of the officers may also be engaged, to some extent, at least, in the selling of the coal.

The first step is, therefore, to make a separation as between the items known as "General Expense" and those of the selling organization. This may have to be done on a somewhat arbitrary method in some instances, but the judgment of these officers themselves can usually be relied upon for making such a general subdivision.

This division having been made, some basis must be obtained for dividing the expense among the operations. Generally speaking, the tonnage basis is probably the nearest to being correct, but there may be reasons why an arbitrary basis is more equitable. The time of the general manager or others of the staff may be devoted to a considerable extent to the development of new property, in which case an arbitrary subdivision will again need to be made. There may be affiliated interests not connected with the operating or selling end which may require another subdivision.

The laws of some states provide that the salaries, particularly of the president and of the secretary or treasurer, must be fixed by the stockholders at the time of their annual meeting and in the case of a number of companies affiliated under one management, the vote passed at this annual meeting may be the determining factor as to the amount of salary of some officials to be apportioned among the various affiliated companies.

When it comes to the question of a division of the expenses the same questions are again met, but it is frequently possible to allocate the traveling and other similar expenses to some particular account and only the ones in which such an allocation is not possible need be distributed.

Office salaries not otherwise subject to subdivision should be pro-rated on a tonnage basis.

Rent.—The rent of office buildings, if the company's activities are confined to coal mining, should be pro-rated on a tonnage basis. In the event the rent paid is for the purpose of housing other activities probably the best method of division is on the basis of floor space occupied by different functions of the organization. In figuring this, however, due consideration should be given to the difference in value of floor space in various sections of the same building.

Legal Expenses.—Legal expenses, in the absence of specific reasons to the contrary, should be pro-rated on a tonnage basis.

Selling Expense.—Selling expense is usually made up of officers' salaries and expenses, salesmen's salaries and expenses, other office salaries, rent, advertising, commissions, etc. As has heretofore been noted under the heading of general expenses, the officer in charge of sales is frequently connected in other ways with the operation of the mine and some careful estimate should be made by him of the proportion of his salary which should properly be charged to the sales end of the business.

Generally speaking, the total quantity of coal sold from all mines should be the divisor of these expenses, but there may be some well considered cases in which coal from a certain mine needed for some certain purpose and under a single contract may be sold at comparatively low expense, whereas from other mines where the sales are of a miscellaneous character, time and expense greatly in excess of the other class may be necessary. In this case no violation would be done to good accounting principles to fix an arbitrary figure for one of these classes, but as a rule such a division is undesirable.

Where preparation facilities are equal it is usually left somewhat to the judgment of the shipping clerk as to the mine from which various orders should be shipped, and this is affected from time to time by car supply, mine accidents, etc.

Salesmen's Salaries and Expenses

The same remarks will apply to salesmen's salaries and expenses and other office salaries. The rent of the main office will necessarily have to be figured either on the basis of square feet of floor space or specifically if a certain amount is paid for quarters of the sales department, but a segregation should always be made. Branch office expenses are usually easily obtainable, being specific charges.

Advertising

Generally speaking the advertising is a direct charge to sales expense and should be so treated. Charges for advertising should be carried on an accrual basis. If advertising contracts are entered into and lump sum payments are required at the time of placing orders, the cost should, of course, be spread over a corresponding period.

Commissions

The matter of accounting for commissions is a comparatively simple one since the commission should be figured on each invoice and set up on the books at the time when the coal is invoiced to the customer, the net return to the mine being stated in the accounts at a price less commissions.

Reserve for Hazards in Coal Mining.—The preceding chapters have dealt with items which are unqualifiedly proper charges to coal cost. Many accountants consider that because of the hazardous nature of coal mining with respect to the property, there should be included in the mining cost a charge for contingencies or, as some term it, "mining hazards."

Regardless of whether this is an item which is properly included in cost, or is, more properly speaking, a charge against income, there is no doubt that a reserve should be set aside out of earnings to meet the cost of such mining hazards when and if these contingencies occur. This reserve account provides against such catastrophes and abnormal losses as explosions, squeezes, caving of surface, floods and mine fires which are not and cannot be covered by insurance.

If a company could be found willing to insure against such losses the cost of the premium would undoubtedly be permitted by the Treasury Department as an allowable expense and this fact lends considerable force to the argument that since the operator is required to carry the cost of this risk himself, he should be allowed to deduct the amount necessary to provide such a reserve, but the framers of the revenue laws thus far have not yet accepted such a viewpoint.

During the time when the Engineers' Committee of the United States Fuel Administration was giving consideration to coal mining costs for the purpose of fixing sales prices, they allowed a certain amount in addition to the ascertained cost of the coal to cover such mining hazards. In the report of the Engineers' Committee, page 15, referring to the cost forms, we find the following:

"Contingent funds noted on the blank were generally omitted, but in a few cases, especially when the need of such funds had recently been felt, most ample allowances were made. After being considered, it was decided to apply in each district amounts obtained by studying the claims of the better operators of such district, after obtaining, from the best available sources, reliable figures as to the cost of lands and amount and value of improvements characteristic of the district.

"The question of contingent reserves is a serious one. From a strict cost-accounting standpoint, no cost can be permitted until incurred. Nevertheless, such reserves are essential to an industry involving the great risk incident to coal mining, and with the full knowledge that such reserves are used only for major accidents or calamities, and that ordinary losses regularly incurred are charged to the costs of operation, it was decided to include a small amount for contingent reserve in the general allowance."

The need for a contingent reserve is dealt with at considerable length in the report of the Cost Accounting Committee of the National Coal Association, made to its Board of Directors at the time of the convention in May, 1919, as follows:

"In the case of permanent enterprises, the funds derived from charges to operating cost to cover depreciation and depletion are to replace plant and equipment becoming worn out or obsolete; but in coal mining or other wasting enterprises, the purpose of such fund is to replace and redeem the capital invested in the wasting assets, and such duty of redemption fully taxes the allowable charges for depletion and depreciation.

"As a general rule, the buildings and major items of plant and equipment placed at a coal mine are calculated to last, with proper care and repair, do last the life of the mine, and therefore obsolescence of coal mine plant and equipment results more often from accident than by installation of new appliances. Depletion and depreciation are items of prime cost that can be measured with reasonable exactness and properly provided for by charges to current expense of operation; but coal mining is a hazardous business, and in some regions extra hazardous, and obsolescence being a contingency, common prudence dictates, in order to avoid possible financial embarrassment, that there should be periodically reserved and built up from net income sufficient provision to meet any probable contingency. Such reserve is not an item of current cost, and therefore not deductible in determining taxable income, but the cost upon the realization of the contingency is a proper charge to current expense, and should then be so charged, and not charged to contingent reserve.

"The increase in current expense, by reason of such happening, will reduce current net income, and therefore a corresponding amount, or as much thereof as may be possible, should be transferred from contingent reserve to Profit and Loss.

"The general conditions existing, and the experience of any mine or mining region, will dictate to the operator the necessary provision for contingencies.

"Though maintenance expense is practically a constant factor of current expense in coal mining, prudence also suggests in accordance with the peculiarities of each case the segregation from income of a maintenance reserve."

The "Uniform Classification of Accounts for Anthracite Coal Operators," under the caption of "Reserve for Mining Hazards," contains the following instructions:

"Credit to this account during each accounting period an estimated amount to cover mining hazards.

"Charge this account and credit 'Mining Hazard Claims Determined' with the amount of claims which have been determined and are payable.

"Charge this account also with the expenses of reopening areas closed by squeezes and caves, mine fires, property damaged by explosion, floods, etc., damages to surface and structures on same, including cost of property acquired in settlement of damage claims in excess of the value of such property for the purpose for which it will be used and the expenses of rehabilitating property damaged, not purchased. Also, costs of relocating and building roads and highways, legal and court costs incidental to property and personal damage claims should be charged to this account.

"The rate per ton may be increased or decreased from time to time in order to keep this reserve account at an amount representing a safe margin."

The descriptions immediately preceding are quite specific as to the nature of the hazards, which should be provided for through the establishment of such funds.

In the first reports prepared by the Federal Trade Commission, consideration was given to this item, but it was eliminated from the succeeding cost sheets. The Federal Trade Commission tried for a considerable period of time to get sufficient data as to the cost, spread over a number of years, of items which would properly become chargeable to such a contingent reserve fund, that they might reach a conclusion as to a proper amount which might be considered, but the information obtained on the subject was comparatively meager.

Although the item may be one not properly included in coal costs (and on that point accountants differ), and may not be deducted as a portion of the expense of operation in reporting to the Treasury Department, prudence would dictate that such a fund be established in most operations, through being set aside as segregated surplus, ear-marked for the particular purpose only of meeting such contingencies if and when they arise.

Deferred Expenses.—Maintenance in a coal mine is practically a constantly recurring expense. As the workings advance there is a continuous need for more steel rail, more copper wire, additional mine cars, locomotives, etc. In addition to those items of equipment made necessary by the advance of workings, there are the replacements of similar items of worn-out equipment to be taken care of. In the case of replacements of smaller items involving not too large sums of money the cost can readily be absorbed in the operation from month to month without any appreciable effect on the general level of cost.

The purchase of additional items of equipment either for the purpose of keeping step with advancing workings or replacements of worn-out items of the same nature frequently means the expenditure of very considerable sums of money, which, if permitted to go against the cost for a single month, will violently distort the cost for that month and cause a peak even in the cumulative figures.

While, of course, these items can readily be explained, many mine managers prefer not to disturb the general trend of costs but to spread the cost of such large installations over a period of time measured to some extent by the useful life of the equipment or at least by such a period as will not, through its cost distribution, distort so violently the current production cost. This is accomplished through charging at time of purchase the cost of such items to an account frequently called "Deferred Expense." This account should be credited from month to month with the proportion of the cost of the item purchased or installed which it is desirable to charge into current cost of operation.

It is essential in such a method of handling that this account be subject to ready analysis in order that the monthly charge may be made against the proper division of operating expense to which the unit would have been charged had its cost been included in a single month's operating cost. Such a form of analysis sheet is illustrated in Form 38. Full reference is given to purchase voucher numbers, name of the person from whom purchased and the description of the equipment purchased.

The illustration is chosen from a company whose fiscal year begins April 1. The arrangement of the form should be such as to meet the conditions of each company with respect to its fiscal period. The amount chargeable to each month's cost is readily ascertainable, being the total of the items shown in the column for the month selected. The balance of the account is the aggregate of the totals of the future period.

Such a form will also be found very convenient for the purpose of distributing such accounts as Insurance Paid in Advance, etc.

Some operators prefer to set up from month to month a charge for maintenance, carrying the credit into a maintenance reserve and as replacements, repairs and the purchase of additional equipment, made necessary because of advanced workings, become necessary to make charges for such items to the reserve account in order that such an equalization of cost may be maintained, but the writer prefers to meet such extraordinary expenses through the Deferred Expense account.

FORM 38.—ANALYSIS SHEET FOR DEFERRED EXPENSE ACCOUNT

Date	Voucher No.	From Whom Purchased	Description	How Many Months	Amount	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Balance Forward
Apr. 20	125	Jeffrey Mfg. Co.	1 Locomotive	12	$7,200		$600	$600	$600	$600	$600	$600	$600	$600	$600.00	$600.00	$600.00	$600
July 31	650	Carnegie Steel Co.	Steel Rail	9	2,700					300	300	300	300	300	300.00	300.00	300.00	300
July 1	651	Watt Mining Car Co.	Mine Cars	6	3,000				500	500	500	500	500	500				
Dec. 28	1248	Leschen Rope Co.	Rope	3	1,000										333.33	333.33	333.34	

Special Work Authorizations.—As a general proposition the mine superintendent is clothed with all authority for the contracting of all expenses in connection with the ordinary and regular operation of the mine.

ESTIMATE No. ....

.... 191 ....

GENERAL MANAGER.

DEAR SIR:—I WOULD ASK FOR AUTHORITY TO DO THE FOLLOWING WORK AT .... MINE.

THE COST, FOR LABOR AND MATERIAL NOT TO EXCEED .... DOLLARS.

.... SUPT.

AUTHORIZED

.... 191 ....

CHARGE TO .... GENERAL MANAGER.

NOTE—This form is to be used for all repairs and improvements, except the routine work necessary for the daily operation of the mine. Estimate to be made in TRIPLICATE, the three copies to be mailed to General Manager. When work is authorized, one copy to be returned to mine, and one copy to be sent to Auditor, to be checked with pay rolls. Estimate must give cost for labor and material in detail, and state necessity for same, and no work is to be done until duly authorized.

FORM 39.—Special work authorization.

Many companies require that the superintendent obtain special permission prior to the outlay of any considerable amount of money for general repairs and improvements. In such cases it is frequently desirable to open a special account, in order that the total cost of such repairs and betterments may be ascertained. The work to be done may be the construction or rebuilding of some building of minor importance, such as a blacksmith shop, etc., the painting of operating buildings or dwellings, the construction of concrete foundations for engines or generators, the work in connection of which may be spread over a considerable period of time. It may be desirable to accumulate these expenses in a separate account until the work has been completed, and then to charge them off through the Deferred Expense account over a sufficient number of months, that the general level of costs be not materially distorted. This method of handling is also convenient to obtain the total value of a structure for fire insurance purposes, or in connection with the installation of some item of equipment which will be capitalized. Of course in the last mentioned case when the authorization account is closed it will be to a proper asset account. A simple form for obtaining such authority is shown in Form 39.

CHAPTER XIV

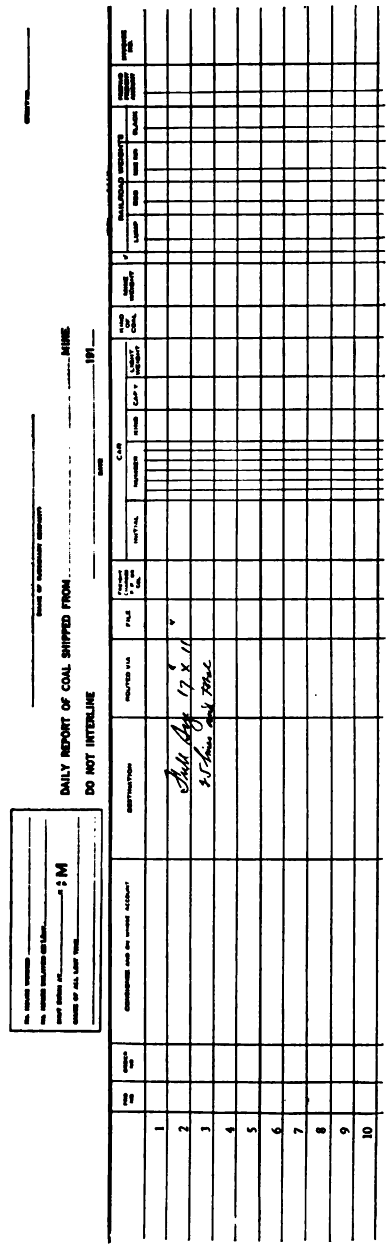
SALES STATISTICS

The Shipping Report.—That the sales statistics of a coal mining company may be readily prepared, it is necessary that uniformity of report begin with the shipment of the coal from the mine. For this purpose, it is desirable that the weighmaster, or whoever is charged with the duty of waybilling and shipping the coal, make a daily report to the general office which will show full information as to the consignee, destination, routing, initials and number of the car, whether it is a hopper, box or flat-bottom gondola, the capacity in tons, light weight, size or grade of coal.

Where loading facilities are such as to permit the information to be obtained, the form should also show the mine weight of the coal dumped into each individual car. This is usually possible where the coal is loaded by gravity. It may be that coal is being shipped of a different grade than the grade on which the miners' wage scale is based, but under any condition the payroll weight should be shown. Statistics kept for the purpose will very quickly produce ratio values which will enable the accountants to determine whether the railroad weight reported is in accordance with the mine weight, even though the coal sold may be of a different size than the payroll basis.

When shaker or other mechanical screens are employed and where the coal is loaded by a loading boom, it is usually impossible to obtain this detailed information, the only check being at the end of the day or at a period when the mine stops operation.

Where separate offices are maintained for the shipping



FORM 40.—Daily report blank for coal shipments.

department and the accounting department, it is desirable that the report of shipments be manifolded in order that both the accountant and the shipper may have full information as to shipments. A copy should also be preserved at the mine office for future reference. The report should show information with respect to the number of hours worked and lost and the reason for closing down before the end of the regular working day. This information is necessary because of the fact that some leases provide for abatement of royalties in the event of shutting down the mine due to strikes, failures of machinery, etc., and this report becomes a valuable permanent record for that purpose.

A cut of such a report is reproduced in Form 40. Its full size is 17 x 11 in. It should be perforated on the end for the purpose of binding. Where it is possible to obtain the mine weights of the individual cars the sheet should be totaled daily, all partly loaded cars added, deductions being made for the part loads under the tipple at the beginning of operation in the morning, the total thus obtained being the payroll weight for each day's operation.

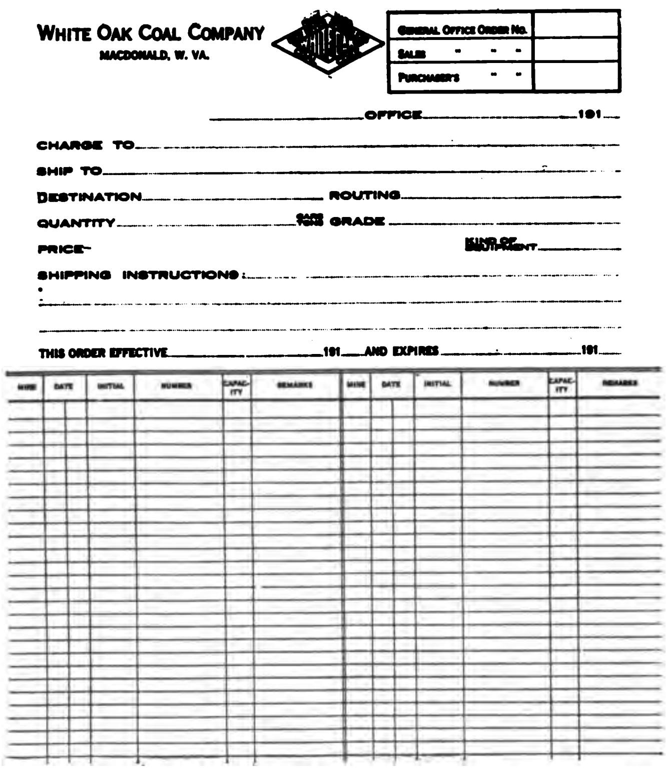
From the copy of the report to the shipping or sales department the notices of shipments are made, posting being made to the shipment record to indicate to what extent the contracts have been filled, etc.

The sales department record should show complete information as to order number of both customer and seller, full charge and shipping instructions, quantity and price, the effective date, etc., etc.

A form for such information is illustrated in Form 41. It is on ledger paper of good weight to permit frequent handling, punched for filing in post binder. If additional posting space is needed a continuation sheet can be procured, considerably condensed as to headings.

These data may very conveniently be compiled on a card system similarly ruled.

Practically all coal is sold upon the basis of railroad weights. With comparatively few exceptions, the weights are ascertained at a point different from the point of shipment, the cars being weighed on railroad track scales by railroad weighmasters situated at points varying from


WHITE OAK COAL COMPANY
MACDONALD, W. VA.

General Office Order No.	
Sales " " "	
Purchaser's " "	

______ OFFICE ______ 191__

CHARGE TO ______

SHIP TO ______

DESTINATION ______ ROUTING ______

QUANTITY ______ CARS / TONS GRADE ______

PRICE— KIND OF EQUIPMENT ______

SHIPPING INSTRUCTIONS: ______

THIS ORDER EFFECTIVE ______ 191__ AND EXPIRES ______ 191__

Mine	Date	Initial	Number	Capacity	Remarks	Mine	Date	Initial	Number	Capacity	Remarks

FORM 41.—Record of Coal Shipped.

one to 300 miles from the mine, depending upon the district from which the coal is shipped and the destination of the car. Coal consigned to tidewater points is commonly weighed only at the time of dumping into vessel. For this reason unavoidable delays occur in obtaining the necessary information with which to invoice cars to customers.

It is the custom of the railroad companies to send weights daily to the shippers on weight sheets which are either the original or carbon copies of the railroad company's records. These records show the consignee and destination, car number, initial, kind of coal, kind of car and should show the gross, tare and net weights as ascertained by the railroad company's weighing. The tare weight reported by the railroad company is usually the stenciled one.

Upon receipt in the office of the coal company of the railroad company's report, deduction of the tare from the gross weight should be checked with a view to determine the correctness of the net weight. Errors in subtraction are very frequent, because of the fact that these railroad weights are usually ascertained in considerable hurry and frequently under circumstances which do not make for accuracy. It is, therefore, always advisable that the deductions be proved before the weights are entered on the shipping report.

The next step is to transcribe the weights from the railroad weight sheets to the shipping report, the entry being usually in hundredweights, not in pounds. The weight should be placed in the proper column as represented by the size of coal loaded, viz., lump, egg, mine-run, slack, or whatever it may be. When entering such weights the tare weight as shown by the railroad scale report should be checked by the entry clerk against the light weight as shown by the report of shipments and any discrepancy noted made the subject of investigation through correspondence with the railroad scale office.

In case the information then obtained is not sufficient to clear up the discrepancy, it should be pursued through further correspondence with the car accountant or superintendent of transportation of the road which owns the car, where information can always be obtained as to the stenciled light weight of the car.

At the time of entering the weights a mental comparison should also be made between the railroad net weight and the mine weight of the coal loaded into the car. Frequently very marked shortages in railroad weights may be detected in this manner.

Reconsignment of Coal in Transit.—Because of embargoes and for other reasons it not infrequently hap-

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MR.______________________________

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DEAR SIR:—

THE FOLLOWING CARS OF COAL ARE NOW ENROUTE BILLED AS FOLLOWS:—

CONSIGNEE______________________________

DESTINATION______________________________ ROUTING______________

DATE OF SHIPT.	MINE	BILLING POINT	W. B. No.	INITIAL	CAR NUMBER	GRADE	

KINDLY DIVERT SAME TO THE FOLLOWING:—

CONSIGNEE______________________________

DESTINATION______________________________ ROUTE______________

REMARKS______________________________

____

____

____

YOURS VERY TRULY.

OAK COAL CO.

IN YOUR REPLY PLEASE REFER TO OUR FILE

BY______________________________

FORM 42.—Diversion Order.

pens that coal must be reconsigned to another consignee after it has left the mine. Such reconsignments are sufficiently frequent as to warrant in many cases the printing of special forms to transmit to the railroad officials, the accounting and sales departments, as well as to the branch offices, if any, interested, the orders for and information as to such diversions. The illustration, Form 42, covers a form of such diversion order. It should be made with sufficient carbon copies that all departments interested may be fully advised.

In the arithmetical proving of deduction of the tare from the gross weight on the railroad weight sheet very frequent errors are found. If this were made the subject of letter correspondence in order to determine which of the three weights—gross, tare or net—reported is incorrect, the work would sometimes become burdensome. This work can be greatly simplified by the printing of a small form through the use of which the information may be obtained without great labor. This form should be made in duplicate, a copy being retained until such a time as the information has been returned by the railroad weighmaster.

In order that scale sheets may not be held out of the files awaiting the return of such information, it is desirable that a rubber stamp impression "Transferred to Supplementary Scale Sheet" be placed over the entry on the original report and that the report be allowed to go to the files and the carbon copy of the supplementary scale sheet, or inquiry addressed to the railroad weighmaster, be retained as the record until such a time as the correct weight has been returned. Such a form is illustrated herewith. (See Form 43.)

A frequent examination of the shipping reports is necessary in order that cars may not be held open without record of weight an undue length of time. Here again the matter of correspondence with the railroad weighmaster can be very greatly reduced through the printing of a form on which will be listed the data with respect to the shipment of certain cars for which railroad weights have not been received. This form will answer in all purposes as a scale sheet and may serve the good purpose also of calling attention of the railroad weighmaster to the fact that he has failed to make revenue billing at

MR.______________________AGENT MACDONALD, W VA.,____________191__

______________________RY No.______________

DEAR SIR:
IN CHECKING UP YOUR SCALE SHEET OF NUMBER AND DATE SHOWN BELOW WE FIND THE FOLLOWING DISCREPANCIES IN { WEIGHT, CONSIGNEE, DESTINATION }
PLEASE REFER TO YOUR ORIGINAL RECORDS AND FURNISH HEREON INFORMATION REQUESTED.

YOURS TRULY,

COAL COMPANY, W. B. REED, AUDITOR

DATE SHIPPED	DATE OF Scale Sheet	SHEET NO.	MINE	CAR		CONSIGNEE AND DESTINATION				WEIGHTS MAKE CORRECTIONS IN RED INK		
				INITIAL	NUMBER	OUR MINE REPORT READS	Check here if O.K.	YOUR SCALE SHEET READS	Check here if O.K.	GROSS	TARE	NET
						Full Size 12" x 5½"						

ACCOUNTING DEPARTMENT,
COAL CO.
GENTLEMEN:
AS PER ABOVE REQUEST I HAVE SHOWN CORRECT { CONSIGNEE, DESTINATION, WEIGHT } IN SPACE PROVIDED ABOVE

____________________191__

YOURS TRULY, ____________________

FORM 43.—Supplementary Scale Sheet.

MACDONALD. W. VA.,.................................... 191.......

....

....

DEAR SIR:

BELOW WE GIVE YOU LIST OF CAR NUMBERS ON WHICH WEIGHTS HAVE NOT BEEN RECEIVED. KINDLY INSERT WEIGHTS AND RETURN BY FIRST MAIL TO W. B. REED, AUDITOR, MACDONALD, W. VA.

DATE	MINE	CAR		CONSIGNEE	DESTINATION	WEIGHT		
		INITIAL	NUMBER			GROSS	TARE	NET
				Full Size 11" x 8½"				

Certified Correct.......................................Title.......................................

FORM 44.—Weight Certificate.

the same time he omitted the report of weights to the shipper.[1] (See Form 44.)

As heretofore indicated, weights may not be received in the office of the shipper with any degree of promptness, due to the fact that coal from one mine may travel in different directions and the weights be ascertained over any one of a dozen scales. At the end of any month there may be outstanding coal from one to fifteen or more different days, depending upon the geographical location of the mine.

It is usually desirable to hold the shipping records open for a few days in order to obtain a reasonable percentage of actual weights on the cars shipped during the latter days of the month and in most districts it is not usually desirable to begin closing the sales record until probably the 5th of the month—in many districts even the 10th may be too early.

Sufficient weights having been ascertained, the weight sheets checked and weights entered, the columns on the shipping report representing the various sizes should be totaled for each day and carried to a recapitulation sheet, by which the monthly totals of shipments will be ascertained.

The Tonnage Recapitulation.—The recapitulation of tonnage as compiled from the shipping record of weights posted from railroad scale sheets may be made on a sheet of a report similar to the Daily Report of shipments of which it is a recapitulation, Form 45.

The work will be expedited considerably if a properly ruled and printed blank be prepared for this purpose. Such a form selected from a company producing a number of sizes of coal is illustrated. It provides columns that the total mine (payroll) weight of each size of coal dumped each day may be shown, and in parallel columns the railroad or gaugers' weights which are the basis of

[1] It is also a convenient form on which to furnish a certificate of weight to the purchaser who may request such a record, as a supporting paper in connection with a claim for shortage, etc.

RECAPITULATION OF.................................MINE No....................... Month of................................, 19......

		PAY ROLL WEIGHTS—COAL			WEIGHTS REPORTED BY GAUGERS AND RAILROAD SCALES												
	Date	1¼" Lump Weight	¾" Lump Weight	Run of Mine Weight	3" Lump	1¼" Lump	¾" Lump	Mine Run	Crushed	3" Slack	Nut	1¼" Slack	¾" Slack				TOTAL
COAL ON HAND																	
	1																
	2																
	3																
	4																
	28																
	29																
	30																
	31																
Total Weights of Coal Loaded in Railroad Cars																	
Supplementary Coal on Hand Last of Month																	
Engine Coal																	
TOTAL																	

RECAPITULATION OF MINE WEIGHTS					
1¼" Lump,	Tons			Less Coal on Hand Beginning of Month	
1" Lump,	"			Total Cwts.	
Run of Mine,	"			Total Tons	
Total,	"				
Credited,	"				
Total,	"				
Not Credited,	"				
Total Pay Roll,	"				

FORM 45.—Recapitulation sheet for all mine weights by sizes.

sales. The totals of payroll weights will balance the payroll and coal proof, and if audited carefully will check the omission of any cars of prepared or mine-run coal from the shipping report. The railroad weight columns will balance in size the same columns on the sales sheet.

A comparison of the payroll weights with the railroad weights of prepared sizes will show the proportion of screenings which will in turn be checked by the total of such sizes shipped.

Inventories.—A number of cars will usually be found at the end of the month to be standing open on the daily report of shipments without weights. The full record with respect to these cars should be transcribed to a similar sheet headed "Inventory—Coal in transit" and be so accounted for in the recapitulation at estimated weights. This estimate can be a very close one, because of the fact that usually other cars of a similar classification are loaded with the same size or grade of coal and, when the mine weight is shown in comparison it is easy to reach a close approximation of the weight for the car for which the railroad has not yet reported.

On the daily report where such a car appears there should be stamped, in the weight column, "Carried to inventory." These inventory sheets should be filed with the reports for the succeeding month so that when a weight report sheet is received after the day of monthly closing covering a car shipped in the preceding month, it will not be necessary to go back to the record of a preceding period to complete the accounting record.

In making the monthly recapitulation of tonnage shipped, the inventory page covering cars of a preceding month will, of course, be listed in the sales as actual shipments, the estimated weights of the coal carried to inventory at the end of the preceding month being deducted from the recapitulation, so that the shipping record tonnage will contain in the way of discrepancies only the difference between the actual and estimated weights of one month's inventory coal, each month's reversal of inventories "washing" all prior discrepancies.

In addition to the shipment of coal in railroad cars there is at almost all mines a considerable amount of other coal which must be taken into consideration in the accounting so that all of the production may be accounted for. This is made up of coal burned under boilers, that sent to the blacksmith shop, coal wrecked in the mine, for which the miner must be paid, coal sold to employees and others at the mine, either through deduction from the payroll, by cash, or through transfer of the charge to the general office for collection; the sale of coal at the tipple for railroad locomotive fuel, etc. There should also be taken into consideration the estimated weights of any part loads of coal remaining under the tipple on the last day of the month. This last mentioned coal would, of course, be charged to "Inventory—Coal on hand," as should also any fully loaded cars held unconsigned on the sidetracks of the operator.

Production of the nature noted in the preceding paragraph is usually the most troublesome to account for and it is sometimes desirable that a supplementary report of coal produced be prepared and sent to the accounting department at the close of the month to summarize the coal of this nature. Such a report is illustrated in Form 46. This report may conveniently be combined with the Coal Proof which was illustrated on page 60, the full size of the sheet being 17 x 22 in., the same as the daily report of shipments.

The Sales Record.—The invoicing of bituminous coal to the customer presents some phases which are peculiar to the coal industry and which are not met with in most lines of business. In other industries it is usually possible to invoice immediately upon the shipment from the works or factory. Coal, however, as indicated heretofore cannot be billed until the railroad weight is received.

SUPPLEMENTARY REPORT OF COAL PRODUCED AT

.......................................MINE.

Month of....................................19....

CHARGE TO	No. Wagons	Mine W'ght.	Kind of Coal	Run of Mine	Slack		Price Per Ton or W'g'h	AMOUNT
Boilers								
Blacksmith Shop								
Wrecked Coal								
Total Fuel—Cwt.								
Tons: To be filled in by Accounting Department								
Coked								
Pay Roll Coal (Deducted from Pay-roll)								
Cash Sales (To be Collected By This Office)								
Coal sold to outside parties on authority of General Office (Collections to be Made by Them) List								
Total Local Sales—Cwt.								
R. R. Engine Coal—Cwt.								
Total Local Sales and Fuel—Cwt.								
TOTAL—TONS								

PART LOADS ON HAND AT END OF MONTH

Give car initial, number, kind of coal. Estimate weights and enter in proper column.

Initial	Number	Kind of Car	Mine W'ght	Kind of Coal	Lump Est. W'ght	Egg Est. W'ght	R.M. Est. W'ght	Slack Est. W'ght		Coke
Bin Coal										
Coke on Yard										

Form 46.—Supplementary report of coal produced.

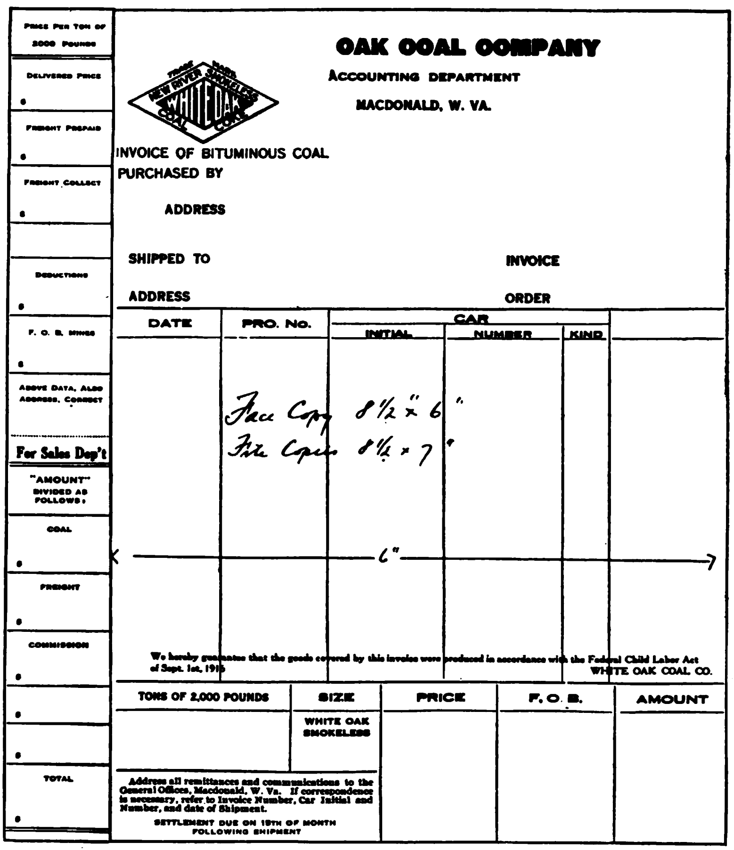
The choice of forms upon which billing is to be made to the customer is a matter for the individual judgment of the operator. They should be arranged, however, in such a way as to afford carbon copies of the invoice, and be so filed that the information they contain may be readily accessible. The form itself should provide, in addition to spaces for the name and address of the buyer, information as to the destination and the consignee, if the latter is other than the purchaser. It is well that the invoice bear a register number and where the customer desires it, the buyer's order number should also appear. Full information as to date of shipment, car initial and number, kind of car and the weight of the coal in hundredweights should be shown.

Until a few years ago it was quite a common practice of coal operators to have their invoice forms so ruled that many different grades might be shown in parallel columns on the same invoice. Experience has demonstrated that as a general rule coal shipped from a particular mine to one consignee is usually of the same size or grade, and with that in view invoices have in recent years been considerably simplified through providing a separate invoice for each grade of coal shipped.

The accounting will be very much expedited if a separate set of invoices and separate sales sheets be maintained by the operator for each mine shipping coal. This will avoid many hours of vexatious analysis which is necessitated by including coal for a number of mines on one invoice when sales realization for each mine is wanted. The invoice should contain for working data information as to delivered price, rate of freight if prepaid, deductions by way of commissions, etc., the price at the mine, and, through calculation, the net amounts for coal, freight and commissions should appear.

It will be found quite convenient if a sufficient number of carbon copies be made that the posting may be made to the ledger from a carbon copy of the invoice itself.

A very simple invoice in manifold form is illustrated in Form 47. The face copy is in size 8½ x 6 in., and is so printed as to tear off without disclosing the analysis of coal, freight, commissions, etc. The file copies, of which there are two, one for a book record and the other for posting, are in size 8½ x 7 in. Some companies prefer to



PRICE PER TON OF 2000 POUNDS

DELIVERED PRICE $

FREIGHT PREPAID $

FREIGHT COLLECT $

DEDUCTIONS $

F. O. B. MINES $

ABOVE DATA, ALSO ADDRESS, CORRECT

For Sales Dep't

"AMOUNT" DIVIDED AS FOLLOWS:

COAL $

FREIGHT $

COMMISSION $

$

$

TOTAL $

OAK COAL COMPANY

ACCOUNTING DEPARTMENT

MACDONALD, W. VA.

INVOICE OF BITUMINOUS COAL

PURCHASED BY

ADDRESS

SHIPPED TO INVOICE

ADDRESS ORDER

DATE	PRO. No.	CAR INITIAL	CAR NUMBER	CAR KIND	
	Face Copy 8½" x 6"				
	File Copies 8½ x 7"				

6"

We hereby guarantee that the goods covered by this invoice were produced in accordance with the Federal Child Labor Act of Sept. 1st, 1916

WHITE OAK COAL CO.

TONS OF 2,000 POUNDS	SIZE	PRICE	F. O. B.	AMOUNT
	WHITE OAK SMOKELESS			

Address all remittances and communications to the General Offices, Macdonald, W. Va. If correspondence is necessary, refer to Invoice Number, Car Initial and Number, and date of Shipment.

SETTLEMENT DUE ON 15TH OF MONTH FOLLOWING SHIPMENT

FORM 47.—Coal Invoice.

make the invoices direct from the railroad weight sheet. The invoice is then checked against the weight shown upon the daily report of shipments, and thus a three-way check is developed as to the accuracy of the weight entered on both the invoice and the report of shipments, since the entries on both are made from the same source (scale sheet) by two different persons or at different times.

Customs Invoices.—Since a considerable tonnage of bituminous coal is shipped to Canadian points, it may be well to say something with respect to the certified invoices which are necessary that the cars may pass the Canadian Customs authorities. These invoices are necessarily made separately for each car shipped, since each car must pass upon its own certificate.

It is important that these invoices be mailed to the proper customs official promptly, that they may be on hand when the car arrives at the border, in order to avoid detention with consequent demurrage. For this purpose additional sheets may be added to the invoice form to provide, in addition to the customs invoices, the regular invoice to the customer. The certificate on the face of the invoice should contain information substantially as indicated in Form 48.

I, the undersigned, do hereby certify as follows:

(1) That I am the Auditor of Coal Company, exporter of the goods in the within Invoice mentioned and described;

(2) That the said Invoice is in all respects correct and true;

(3) That the said Invoice contains a true and full statement, showing the price actually paid or to be paid for the said goods, the actual quantity thereof, and all charges thereon;

(4) That the Invoice also exhibits the fair market value of the said goods at the time and place of their direct exportation to Canada, and as when sold at the same time and place in like quantity and condition for home consumption, in the principal markets of the country whence exported directly to Canada, without any discount or deduction for cash, or on account of any drawback or bounty, or on account of any royalty actually payable thereon, or payable thereon when sold for home consumption, but not payable when exported or on account of the exportation thereof, or for any special consideration whatsoever.

(5) That no different Invoice of the goods mentioned in said Invoice has been or will be furnished to any one; and

(6) That no arrangement or understanding affecting the purchase price of the said goods has been or will be made or entered into between the said exporter and purchaser, or by any one on behalf of either of them, either by way of discount, rebate, salary compensation, or in any manner whatsoever, other than as shown in the said Invoice. And that such fair market value is not lower than the wholesale price of the said goods at the said time and place; and that in the case of new or unused goods, such fair market value is not less than the actual cost of production of similar goods at said time and place, plus a reasonable profit thereon.

Dated at

this ———— day of ———— } (Signature) ————————

Auditor.

Per————————

FORM 48.—Customs Certification.

Credit Memo. and Allowances.—It frequently happens that cars shipped to one consignee are diverted in transit to another, wrecked or confiscated by the railroad company. This sometimes occurs after the coal has been billed to the first consignee. In this instance it becomes necessary, of course, to issue a credit memorandum to the original consignee and to charge the coal to the person who actually received it. This may be done through the journal, but it is recommended that instead of using the journal for this purpose, credit memoranda be issued on the invoice form suitably marked to indicate that they are credit memoranda and a new billing issued as of the same date. The new billing will take its place on the sales sheet with the current invoices.

The credit invoice should be written up on the bottom of the sales sheet or on a separate sheet for that purpose and the credit totals be deducted from the debit in order to obtain a net realization f. o. b. mines. The cars being billed at the same weight, of course there is no adjustment in tonnage and the coal sales account for the current month will absorb the difference, either debit or credit.

In the event of allowances being made with respect to price, a similar line of action should be followed, a credit memorandum being issued and the entry made in red on the sales sheet, deducted as above.

If the correction is one carrying adjustment in the weight of a particular car, either debit or credit, a corresponding tonnage entry will, of course, need to be made on the daily report of shipments. If it is a car shipped during the current month the correction is made on the shipping report for the day of shipment against the proper car; if the entry is one affecting a car shipped during a preceding month then the entry, either black (addition) or red (deduction) will be made on the sheet inserted in the file for the current month representing the coal brought forward in inventory.

This method is recommended because it will, through

[Sales Sheet] Sales for Month of 191 .... Mine, No.

	LUMP			EGG			RUN OF MINE			NUT & SLACK			Total Tons	Average Price	F. O. B. Mines Total Am't	Prepaid Freight	Commissions	LEDGERS		NAME AND ADDRESS	Invoice Number
	TONS	F. O. B. MINES		TONS	F. O. B. MINES		TONS	F. O. B. MINES		TONS	F. O. B. MINES										
		Price	Amount		Price	Amount		Price	Amount		Price	Amount									

FORM 49.—Monthly sales sheet blank.

one single form of accounting, bring together all of the items which affect in any way the tonnage production or sales realization, and the cumulative figures obtained from the sales sheets themselves will always be in absolute agreement with the revenue accounts of coal sales, thus avoiding any adjustments which otherwise become necessary in the event that corrections of the kind mentioned are made through the journal.

The Sales Sheet.—In order that sales statistics with respect to tonnage and average realization by sizes be readily obtained, the invoice should be written up on a sales sheet so arranged as to show that information concisely. The data provided by the memorandum form on the invoice becomes the source of information for the entry to the sales sheet, the figures of sales realization being entered in net amounts, freight and commissions deducted. The total of the amounts extended to the ledger columns becomes the balancing factor for the control account of the postings to the ledger from the carbon copies of invoices. The arrangement of the form illustrated in Form 49 is such that the tons of each size produced and the average realization f. o. b. mines by size, as well as in total, can readily be figured. Columns are provided for the amount of prepaid freight, commissions, etc.

Inventories.—Coal in transit at the end of the month for which weights have not been received should be estimated and changed to Inventory—Coal in Transit—at the price which will be received for it when actually invoiced to customers. This method of handling, actual prices being used, will not distort the general average of sales from month to month. This entry should, of course, be reversed by credit to the same account at the beginning of the succeeding month, this credit being entered in red ink on the sales sheet when by deduction it becomes a debit to coal sales account.

Coal held unconsigned at the mines or part loads held there should be charged to Inventory—Coal on Hand—at the average cost of production or at the market price in the event the market is lower than the cost. This inventory should be reversed as indicated for the coal in transit.

Where coal is sent to the stock pile, either mine run or slack, charge should be made to the stock pile at a rate per ton which it is felt reasonably sure can be recovered at the time when the coal is shipped from storage and any later transaction in the sale of coal of this nature should be treated as a separate item.

Boiler Coal.—Coal used at the boilers should appear in this sales sheet as an invoice charge at cost of production or market price in the event that the market price is lower than the cost of production.

It will be seen that the intention of the method recommended is that all charges and credits in any way affecting sales or tonnage be handled in a uniform manner. The net sales sheet total of the tons invoiced, by grades, will check the net total of the tons as shown by the recapitulation of the daily reports of shipments plus a supplementary report of coal produced after taking into consideration the tonnage adjustments on inventories at the beginning and closing of the period. Any discrepancies between the weights will, of course, be readily subject to audit by checking of the invoice tonnage reported on the daily report of shipment. The forms of sales sheet adapted to the smokeless fields is illustrated herewith. This form may be elaborated to suit any mine by providing additional columns so headed as to designate the grade of coal customarily sold.

The Sales Ledger.—Because of the fact that the billing record of one month's shipments cannot be closed until a considerable portion of the next month has elapsed, it is desirable that the ruling of the sales ledger be arranged to permit the posting of two months' invoices simultaneously. This is necessary because of the

OAK COAL COMPANY—SALES LEDGER

Sheet No.___

	DEBIT					CREDIT					DEBIT					CREDIT				
	Date	Folio	Size	Tons	Amount	Date	Folio	Size	Tons	Amount	Date	Folio	Size	Tons	Amount	Date	Folio	Size	Tons	Amount

Full Size 17¼" x 18½"

FORM 50.—Sales ledger blank sheet.

fact that invoices for the current month will need to be posted before the tonnage record for the preceding month has been completed. By having a ledger page prepared with double debits and double credits this can readily be accomplished. Such a ruling will be found on the sheet illustrated in Form 50.

CHAPTER XV

MISCELLANEOUS PROFIT AND LOSS ACCOUNTS

Sale of Explosives.—In the cost sheet prepared by the Cost Accounting Committee of the National Coal Association the option is given as to whether the profit or loss from the sale of explosives and smithing shall be treated as an addition to or deduction from the mine operating cost, or as a separate item of profit and loss. In some few sections of the country the agreement made between the operators and the miners provides that explosives used by the miner in the production of coal shall be furnished by the operator at a certain fixed price.

This price is in some instances below the cost of the explosive plus the handling. In such instances this item may properly be considered as a portion of the operating cost since it is an expense imposed by the wage contract. This does not refer to the sale of explosives through the stores or merchandise departments of the operation, when such explosives are sold merely at the current market price and aside from a requirement of a wage agreement with the miners. Under these conditions the sales should be treated as a portion of the operation of the store.

Smithing.—While provision is here made for the handling of the profit or loss on smithing as a separate item, in general practice it may be found much more advantageous to "melt" the smithing by credit posting into some one of the other operating accounts in which the time of the blacksmith, who may be at one time sharpening picks and at another period of the day doing other work, may be charged. Where the separate account is maintained the time of the blacksmith should of course be charged to "smithing" and the credit represented by the charges made against the miners for this labor performed on their behalf posted to the credit of this smithing account.

Heat, Light and Power.—This account should take the credits for heat, light and electric power furnished to miners' dwellings, stores, and if such current is sold for use in houses not owned by the mining company, to them as well; and in the case of power, the price received for current sold to manufacturing plants or any other industry which may purchase from the coal operation. Against the account should be charged the production cost of the power sold, or if purchased power is used, the purchase price of the same, and in addition thereto the cost of maintenance of the power lines necessary to carry such current to the purchasers, as well as depreciation on such equipment, etc.

Dwellings and Farms.—It is necessary that accounts be kept to show the profit or loss due to the ownership and operation of dwellings. In almost every bituminous coal operation it has been found necessary that the coal operator construct a sufficient number of dwellings to properly house his employees. These houses are rented at a very low rate per room. The rental paid in many instances covers the coal supplied to the occupant for heating purposes as well. In some cases electric lights are furnished and included in the monthly charges. It is necessary, therefore, in order that the true showing may be made of the profit or loss on houses that proper charges be made against the dwelling account for repairs, taxes, insurance, depreciation, house coal and for electric lights in the event the last two mentioned items are included in the lump sum charged for the use of the dwelling.

Where a separate charge is made for coal it is frequently covered by the wage agreement at the rate which does not return the cost of production to the owner. Under such conditions the difference between the cost and the amount received for it should be charged against the rental of the dwellings. It is essential also that a proper charge be made for fire insurance. The depreciation should be figured against this particular class of property and charged to "Depreciation of Dwellings" and not as a direct charge to "Depreciation" as a portion of the operating expense.

Several instances have come to the attention of the writer in which the miners live at a point considerably distant from the mines, in which case the operating company pays the transportation of the miners to and from work. In an instance of this kind the cost of such transportation is properly chargeable to the mining operation and should not go against the cost of dwellings.

In many cases, in order to obtain a workable tract of coal, it has been necessary to acquire the surface as well as the mineral, this involving the purchase of farms and farm houses. In these instances the cost of repairs, insurance, etc., should be allocated against the farm, with due credit given for the rental received for the use of land and houses.

Washer Operations.—Where coal is marketed only after being washed the raw coal should be charged to the washery at the cost of production and the washery operations treated as a separate department, full charge being made against the washery for labor, supplies, depreciation, insurance, etc., and a proper proportion of the salary of the superintendent and other mine staff as well as for the selling, administrative and general expenses properly chargeable thereto.

Coke Plant.—Where a portion of the product of a mining plant is coked the coal should be charged to the coke ovens at cost. All additional items of labor, supplies, and the proper proportion of the administrative, sales and general expenses should be charged against the coking operation—due credit, of course, being given for coke sold.

CHAPTER XVI

THE STORE DEPARTMENT

Because of the fact that mines are in many cases located at points remote from markets, the practice of operating, in connection with mining operations, a store for the convenience of the miners, has become quite general. These stores are called upon to furnish the miner with practically all the necessities of life, and are frequently department stores on a smaller scale. Although usually merely a side issue in the mining company's affairs, it is necessary that the accounting for the merchandise operations be conducted in a way which will clearly reflect the results of the operation from month to month in order that the owner may know whether these stores are being operated at a profit or at a loss.

As in almost any other line of industry, a proper accounting presupposes a correct inventory as a beginning point, and that such an inventory shall be taken periodically, certainly not less frequently than once a year, and preferably at three or six months' periods.

It is the custom in many operations to issue to the employees store checks or script, which is negotiable in the company stores. At the time of issue, an assignment of this portion of the employee's earnings is made and this script becomes a charge against the employee's account and is deducted in the semi-monthly pay settlement. Store checks are drawn in comparatively small denominations, and, although there is always the current liability for the amount of unused script outstanding, this amount is comparatively insignificant when compared with the volume of sales, and the liability may for the monthly statement be ignored.

Many sales are on the cash basis. In not a few instances open accounts are maintained with a preferred class of customers.

From these three sources, script, cash and open accounts, the volume of the monthly sales may be readily obtained, and this record is the basis of the monthly accounting for the purpose of ascertaining profit or loss. The amount of sales having been determined, it is necessary to ascertain the cost of such sales. If it is desired to carry cost and sales comparisons on individual sales, this information may be obtained through such an accounting record. In most instances, however, such records are not maintained and it is necessary to fix some method whereby the cost may be estimated from the sales.

A little study of the comparison of the cost of a number of major items compared with the selling price in each class, weighted properly in proportion to the gross amount of business transacted, will give a ratio of selling price to cost corresponding to the average markup throughout the stock. Assuming the markup to be 30 per cent, the cost will represent 100 and the selling price 130. The amount of sales divided by this figure will give the cost of merchandise sold. If from the gross sales for a given month this calculated cost be deducted, we have the gross profit on sales.

From this figure should be deducted the current expenses of operation, salaries, rent, heat, light, insurance, etc., the remainder being the net profit for the month. In preparing a statement of the results of conducting the merchandise department it is desirable that figures be produced showing the percentage of profit to sales, the percentage of expenses to sales, etc.

Along with such a statement of earnings should be carried a running statement of stock. Monthly entries should be made crediting Merchandise (stock) and charging Cost of Merchandise Sold. To the Merchandise account should, of course, be charged at the time of payment the purchases of additional stock. The merchandise account will thus show at each month's accounting period the book inventory of the merchandise on hand. Periodically when inventories are taken the difference between the book inventory and the actual inventory will necessarily be written off to the account Cost of Merchandise Sold.

At inventory time when a complete inventory has disclosed any discrepancies and the proper entries have been made, a new ratio should be obtained which will, unless there is some radical departure in the rate of markup during the succeeding period, more accurately reflect the relative selling price as compared with cost.

It may be thought desirable by some to take a semiannual inventory and without adjusting the inventory account change the ratio of selling price to cost to a figure which applied during the second six months of the year will absorb any errors in estimate during the first six months period.

In taking the inventory full consideration should always be given to salability of product and the inventory should be priced by the generally accepted method of pricing inventories, namely, cost or market, whichever is lower, and in the application of this rule unsalable goods should be ignored or reduced to merely nominal value. A failure to follow this simple rule must eventually get the owner of such a merchandise department in serious financial trouble.

The statement herewith reproduced will, in a concise form, reflect the results if the accounts are kept in the manner indicated. Separate accounts should of course be kept with each store operated.

FORM 51.—MERCHANDISE OPERATION STATEMENT BLANK

STATEMENT SHOWING MERCHANDISE OPERATIONS

MONTH OF ————, 1922

		AMOUNT
Sales this month		
Deduct cost of merchandise sold		
Gross profit on sales		
Add miscellaneous earnings		
TOTAL EARNINGS		
CURRENT EXPENSES	Salaries	
	Rent	
	Heat and light	
	Hauling	
	Miscellaneous	
	Insurance	
	Taxes	
	Bad accounts	
DEDUCT TOTAL EXPENSES		
NET PROFIT		
Percentage of profit to sales		
Percentage expenses to sales		
Pay roll earnings		
Percentage sales to P. R. earnings		
Ratio sales price to cost		
INVENTORY (date)		
Add purchases this month		
Add purchases previous months		
Total inventory and purchases to date		
Less cost of merchandise sold to date		
BOOK INVENTORY (date)		
Sales and earnings to date		
Less cost and expenses to date		
NET PROFIT TO DATE		

CHAPTER XVII

INTEREST

The question of whether interest expense should be included in the cost of production, or whether interest on an investment should be included as an item of expense has been the subject of a continuous discussion among accountants. At the 1921 meeting of the National Association of Cost Accountants in Cleveland, the question of the inclusion of interest in cost was made the matter of discussion at a full session, but after being considered from every angle no conclusion was reached.

As indicated, interest is of two kinds; that paid for the use of money of others, and that set up by some on the books to represent a return for the capital invested. In the opinion of the writer, interest of either kind has no place in a cost statement, but of course the amount of interest paid will need to be taken into consideration in fixing the selling price. If it is argued that interest on the investment should be included in cost, the difficulty immediately arises as to what is the proper rate at which it should be charged. In the case of some public service corporations the prices have been fixed at a rate which will return 6 per cent to the investor. It is a well recognized fact that this method of guaranteeing dividends destroys initiative on the part of management. If it is assumed that 6 per cent is an adequate return, to whom do the earnings above that rate belong? To the investor or to the public? If there is any good argument in favor of including interest in cost, the rate should be not 6 per cent, but a rate which is commensurate with the risk of the operation. In the case of a coal mine this rate would necessarily be high. The further difficulty arises of finding a point of separation as between the items which should bear interest chargeable to cost and those which should not. If interest is properly chargeable on the plant and equipment, why not on the inventories and even on the payroll cost of unfinished work?

This question can be further tested by the example of a company issuing its stock, part common with no guaranteed return, and part preferred at 8 per cent, redeemable at a price above par. In this case what is the proper rate of interest return? This is still further complicated if the same company issues bonds at a rate of interest possibly as low as 5 per cent. Is the stockholder's money entitled to a higher rate of interest than that of the bond holder?

It would seem ridiculous to assume that the rate of return should be 6 per cent, have that amount set up on the books and then, when the year has passed and the profit and loss statement is secured, find that the actual result of operation is but 3 per cent on the investment because that is all that was earned regardless of the fact that 6 per cent was charged into cost as the minimum return on the investment.

The handling of interest on the investment in this manner is futile for the reason that if set up on the books as cost it must also be set up as profit. The owner of the business has invested as a stockholder and cannot be a creditor in his own business at the same time for interest earned on the investment.

It is interesting to examine the practice of various Government agencies with respect to the inclusion of interest in cost. The Federal Trade Commission has uniformly taken the position formerly assumed by the Bureau of Corporations, that interest should not be so included. In the conferences which took place among the various Government agencies at the beginning of the war with respect to the determination of the cost of production on cost-plus contracts, the consensus of opinion among accountants was that interest had no place in cost determination. The Federal Trade Commission, however, recognizes the fact that for statistical purposes both cost and interest should be taken into consideration in obtaining figures from which to obtain a selling price.

It has furthermore been the practice of large industrial institutions generally in the United States to disregard interest in cost. In the practical application to the coal industry, a great difficulty would immediately arise as to a separation between interest on the operating plant and the interest on the bonds or other obligations necessitated by the carrying of undeveloped coal lands. Not infrequently bonds are issued to take care of floating indebtedness of a mixed character and it is generally impossible to make an equitable separation between two classes of property if it were desirable to allocate such interest payments.

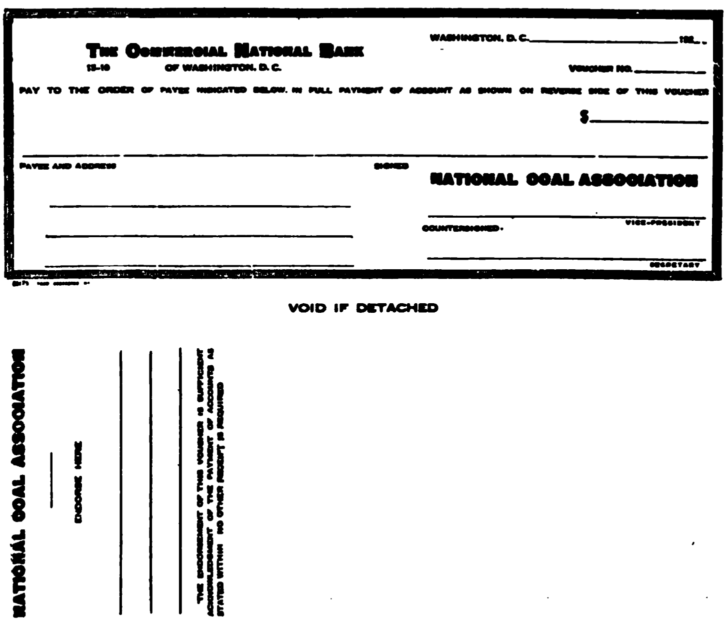
In the figuring of bituminous coal costs therefore, the consensus of opinion among accountants in the industry is that interest expense should in no way enter into the cost of production, but that on the balance sheet and in the preparation of profit and loss statements it should appear merely as a deduction from income. Furthermore, that interest on the investment should not be set up on the books or taken into consideration in the preparation of profit and loss statements.

In the accounting practice monthly entries should be made to the credit of Interest-Matured for the interest accruing during the accounting period. When paid these amounts should be charged to this account.

CHAPTER XVIII

THE VOUCHER SYSTEM

In order that invoices may be filed in a systematic manner and that they may be readily subject to examination by the accountant and of easy reference, it is desirable that some sort of a voucher system be used.


THE COMMERCIAL NATIONAL BANK
15-10 OF WASHINGTON, D. C.
WASHINGTON, D. C. ______ 192__
VOUCHER NO. ______
PAY TO THE ORDER OF PAYEE INDICATED BELOW, IN FULL PAYMENT OF ACCOUNT AS SHOWN ON REVERSE SIDE OF THIS VOUCHER
$ ______
PAYEE AND ADDRESS
SIGNED
NATIONAL COAL ASSOCIATION
VICE-PRESIDENT
COUNTERSIGNED:
SECRETARY

VOID IF DETACHED

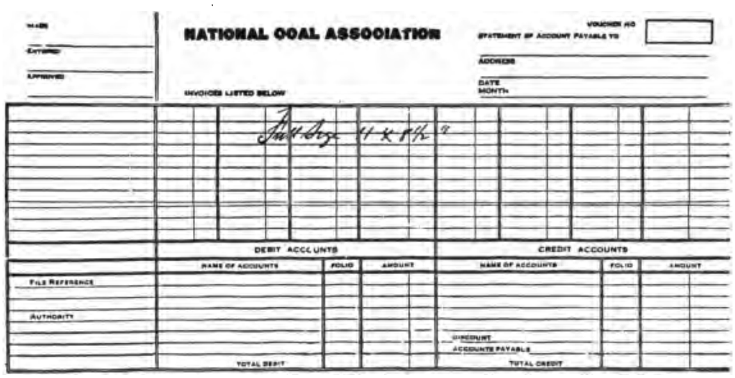
NATIONAL COAL ASSOCIATION
ENDORSE HERE
THE ENDORSEMENT OF THIS VOUCHER IS SUFFICIENT ACKNOWLEDGMENT OF THE PAYMENT OF ACCOUNTS AS STATED WITHIN. NO OTHER RECEIPT IS REQUIRED

FORM 52.—Voucher Check.

Entry to the various accounts through the medium of a voucher or voucher register is very much preferable to the method of posting from the day book, journal, or cash book.

This method of handling is one generally understood, but for the benefit of those who may yet not have adopted it this chapter is written. It presupposes the setting up of an account under some such caption as Accounts Payable or Audited Vouchers Payable, to which shall be credited all amounts for which disbursement is made by check, thus avoiding a multiplicity of accounts which would be brought about if separate ledger accounts were opened with each payee.

The invoices bearing approval as to receipt of material, price, authority of purchase, etc., are listed on the voucher and distribution made to the proper accounts—



Form 53.—Accounts Payable Voucher.

expense or capital. A very great saving of time is effected if the vouchers are padded in such form as to permit the details of the voucher check to be written at the same time as the office or file copy of this record. The invoices, after being listed, should be attached by some permanent form of fastener to the office copy and filed in a suitable file.

Very simple forms of Accounts Payable voucher and voucher check are illustrated by Forms 52 and 53. They are made in triplicate, the first sheet of bond paper of about 20 pounds weight, the second sheet glazed onion skin and the third the voucher check. The invoices are attached to the face copy which goes to the files. Postings are made from the onion skin copy. The voucher check is completed and after entry in the cash book is mailed to the payee. The data with respect to the accounts paid are of course in the inside of the voucher check as folded, leaving the proper space for endorsements on the opposite side of the check proper, as folded. This check is so arranged as to be adaptable for mailing in window envelopes.

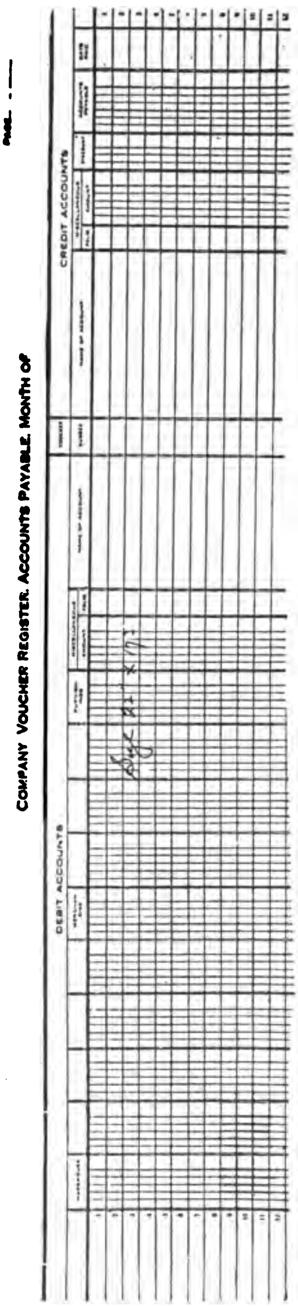
The original copy of the office voucher bears proper spaces to indicate by whom made, and to carry the necessary approval of officers, and if issued on verbal authority, the authority of the person under whose instructions issued.

Where the volume of payments is sufficient to warrant it, a considerable saving of time in posting can be effected by the entering of such vouchers in a voucher register, which is ruled to show on the credit side amounts payable, discount, and a column for miscellaneous credits.

On the debit side are provided columns for such operating and inventory accounts as are most active, columns being provided for the detailed posting of miscellaneous accounts. The total of the Accounts Payable as accumulated in this record is posted to the proper account in the general ledger. This account is charged with the cash disbursements to the close of a given month, and with any journal entries affecting "Accounts Payable," the balance being the unpaid accounts payable. As payments are made proper notation should be made on the voucher register in the column marked "Date Paid." The sum of the unpaid items should aggregate the credit balance of the Accounts Payable. Such a form is illustrated in Form 54.

It may be elaborated by the addition of other columns to any size desired as the experience of the accountant may indicate.

Where the volume of payments is not too great, it may even be found desirable that direct postings be made



FORM 54.—Voucher register sheet.

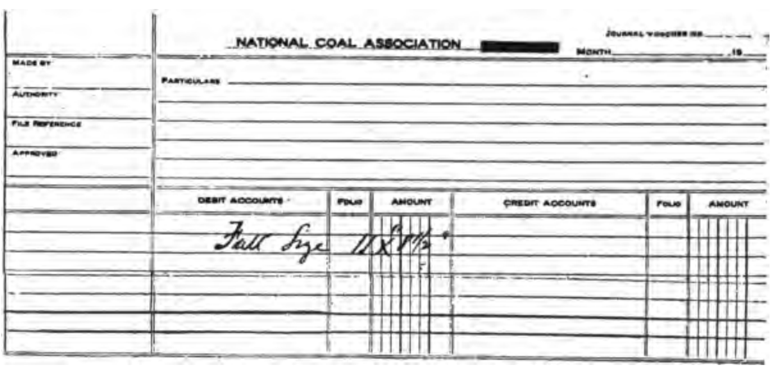
from the voucher to the ledger account Accounts Payable and debit entries made from the voucher itself in detail to the other accounts. Under these conditions a proper check should be made upon the ledger account itself to indicate the items paid, the unchecked items representing in the aggregate the credit balance at the end of a period.

This direct posting gives in the operating and other accounts a detailed record much more quickly accessible than even through the medium of the voucher register, but as before indicated the voucher register saves the bookkeeper a great deal of ledger posting and through its use the work may be more equally distributed by permitting more than one person to work on the books. In the voucher register method, of course, only the totals of the various columns are posted. When the cancelled voucher check comes back from the bank it may be filed with the voucher which it pays, or as some prefer, may be filed alphabetically in a check file and when so disposed of becomes an index of the payments made to the various payees.

Journal Vouchers

What has been said with respect to the filing of papers in connection with Accounts Payable is equally applicable in connection with the journal. Vouchers should be prepared to show in proper form the full details as to entries of this nature and the supporting papers should be attached by the use of some permanent fastener to the journal voucher. Here again the use of a carbon copy will be found advantageous, the original being allowed to go to the files with supporting papers and the postings made from the carbon copy. These vouchers being numbered consecutively and progressively and postings made direct from the voucher to the ledger, avoid the necessity for keeping a journal book, the vouchers answering all purposes because the posting reference being direct to a voucher number afford a much more ready access to the original entry with the supporting papers than through the medium of the old style journal.

In the analysis of accounts and in the building up of statements where reference is necessary to the original papers the voucher system embracing the loose leaf journal will materially expedite matters. Such a form of journal voucher is illustrated in Form 55.



Form 55.—Journal voucher blank.

These vouchers may be filed in an ordinary vertical file or are so arranged that by proper folding they may be filed in the ordinary document file. The carbon copies are arranged for file in post binders, the size and punching being such that stock binders may be purchased almost anywhere to fit them.

To take care of the miscellaneous cash transactions at the mine offices and stores a running account should be kept with each such unit. The entries can well be handled in the mine office through a multiple column cash book. The work in the accounting department can be considerably expedited by having a report form prepared, on which the cash items may be systematically reported.

Form 33. 50 Bks. 7-19. (8). 60250.

MINE OFFICE REPORT NO.______
GENERAL OFFICE JOURNAL VOUCHER NO.______

______ COMPANY MONTH______ 19__

PETTY CASH REPORT FROM______ OFFICE

GIVE DETAILS BELOW OF ANY ITEMS REQUIRING EXPLANATION USING KEY NUMBERS SHOWN

MADE BY:
APPROVED: CLERK
APPROVED: SUPT.
APPROVED: MGR. MINES

MINE OFFICE CREDITS TO PETTY CASH G. O. DEBIT ACCOUNTS	FOLIO	AMOUNT	MINE OFFICE DEBITS TO PETTY CASH G. O CREDIT ACCOUNTS	FOLIO	AMOUNT
1 Pay Roll			21 Balance First of Month		
2 Mdse. Inv. (Purchases)			22 Pay Roll		
3 " Salaries			23 Merchandise Sales		
4 " Postage			24 Local Coal Sales		
5 Tel., Tel. and Postage			25 Rent		
6 Mine Expense			26 Feed Sold		
7 Unclaimed Wages			27 Mine Expense		
8 Bank Cash			28 Unclaimed Wages		
9 Balance Last of Month			29 Post Office (Mdse Earnings)		
10			30 Express Comm. " "		
11			31 Bank Cash		
12			32		
13			33		
14			34		
15			35		
16			36		

Full Size 11" x 8½"

Send Pink and Green Copies to Accounting Department; retain white copy in book.

FORM 56.—Petty cash report blank.

Such a report may as well reach the bookkeeper in such shape as to be immediately available for posting, by having the petty cash report made up on a journal voucher form, as illustrated in Form 56.

All necessary supporting papers should be attached, and full information shown on the form in the space provided.

It will be found convenient to have prepared a form for the report from the mine office of miscellaneous transactions which require the preparation of journal entries. Such a form can be used for the report of transfer of supplies and equipment from one mine to another; for the report of miscellaneous sales; the charges for electric current sold to other than employees; drayage; and in fact any charges for which special reports have not been prepared.

It should be made in sufficient copies to provide a permanent record in the general office accounting. When issued it should follow, if it covers supplies, the same course as to approval for payment, as bills from outside sources.

That proper record be made it is well that it be issued in triplicate. The original should go to the purchasing agent to be handled as other bills for approval. The duplicate should go to the accounting department at the end of the month. The triplicate should be held at the mine office as a permanent record.

Such a form is illustrated in Form 57.

If used for inter-company transactions it may be desirable to use additional copies to provide supporting papers for separate sets of books.

To insure the full record reaching the accountant a monthly statement of such memoranda issued should be sent to the accounting department on some simple form, such as the one illustrated in Form 58.

THE NEW RIVER COMPANY

SEND WHITE AND PINK TO PURCHASING AGENT YELLOW TO ACCOUNTING DEPT.

DATE ________________ 191__

MISCELLANEOUS CHARGES REPORT

DEBIT { ________ COMPANY / ________ MINE } CREDIT { ________ COMPANY / ________ MINE }

QUANTITY	Give full Particulars, and Complete Description of Articles ATTACH BILL OF LADING	UNIT VALUE	DEBIT		CREDIT	
	Full Size 11" x 8½"					

REPORTED BY ________________

APPROVED ________________ SUP'T SHIPPING

P 46. 300 PRS. 6-19 (c) 86166.

FORM 57.—Miscellaneous charge report

Report No.____________

Number Reports Consecutively and Progressively. Do Not Begin New Series when Book is Completed. Begin New Book with Next Number.

General Office Register No.

PRICE Correct, F.O.B. Shipping Point / Destination

.... Purchasing Agent

Material Received.................. Mo.................. Day

Quality.................. Quantity..................

....

Charge.................................... Mine or Shop.

To be used as follows:..................

	$			Repairs to Buildings and Permanent Structures	$	
Mining				Repairs to Buildings and Permanent Structures		
Timbering				Mine Office		
Deadwork				Superint'nd'nce		
Track Laying				Engineering		
Drainage				Dwelling Repairs		
Ventilation				Capital Acc't		
Haulage and Hoisting				Personal Acc't		
Dumping and Tallying				General Exp.		
Preparation						
Railroad Car Loading and Yard Expense						
Power						

FREIGHT OR EXPRESS $ { PREPAID / COLLECT } Charge { SHIPPER / Consignee

APPROVED
.... Receiving Supt.
.... Master Mechanic.
.... General Mgr.

blank.

STATEMENT OF MISCELLANEOUS CHARGES REPORTS ISSUED BY ______________ {MINE / [illegible] / RAILROAD / SHOP}

DURING MONTH ENDED ______________ 19__

NOTE. THIS REPORT TO BE MADE PROMPTLY AT END OF EACH MONTH AND SENT WITH FINAL YELLOW COPIES OF MISCELLANEOUS CHARGES REPORTS TO ACCOUNTING DEPARTMENT. DO NOT HOLD MISCELLANEOUS CHARGES REPORTS UNTIL END OF MONTH IF THEY CAN BE MADE BEFORE THAT TIME.

DATE ISSUED	SERIAL NUMBER	TO WHAT ACCOUNT CHARGED ([illegible])	GENERAL DESCRIPTION OF CREDIT ([illegible])	AMOUNT	
		Full Size 8½ x 11"			

FORM 58.—Monthly statement of miscellaneous charge reports issued.

CHAPTER XIX

THE BALANCE SHEET

In preparing the Balance Sheet some prefer to state the accounts with the fixed assets first; others with the assets in the order of their ready liquidation. The writer prefers the latter method which has the endorsement of many accountants. The Balance Sheet which is illustrated in Form 59 has been adapted from a very carefully prepared one used by some of the anthracite operators.

The suggested accounts can be complete only as to general classification and many additional or subsidiary accounts will of necessity be kept to show the details of these general classifications. This need is more fully explained in the description of the accounts which follows.

Balance Sheet Accounts—Assets.

CURRENT ASSETS.

Cash.

Charge to this account money received in the form of United States coin, United States Treasury and Federal Bank notes, National Bank notes, Cheques or drafts payable on demand and credits to bank accounts.

Credit this account with cash disbursements, by coin, currency, cheque, and bank account debits.

Notes Receivable—Customers.

Charge to this account notes receivable from customers which are payable within one year from date.

Credit this account with notes collected, discounted, charged to "Reserve for Uncollectible Accounts and

BALANCE SHEET

Assets	Balance ——19——	Changes During Fiscal Year: ——Mos. to Date	Changes During Fiscal Year: Month of——
Current Assets:			
Cash			
Notes Receivable. Customers			
Notes Receivable. Affiliated Companies			
Accounts Receivable. Customers			
Accounts Receivable. Affiliated Companies			
Accounts Receivable. Miscellaneous			
Pay Roll Overdraft			
Accounts Receivable. Merchandise Dept.			
Interest Receivable			
Inventory. Coal			
Inventory. Merchandise			
Inventory. Material and Supplies			
Total			
Investments:			
United States Government Obligations			
Bonds—Other than U. S. Government			
Mortgages			
Long Term Notes			
Stocks of Other Companies			
Loans. Affiliated Companies			
Stocks and Bonds. Affiliated Companies			
Total			

RESERVE AND SINKING FUNDS												
FIXED ASSETS:												
Coal Lands. Fee												
Coal Reserves. Undeveloped												
Coal Lands. Leaseholds												
Mine Plant and Equipment												
Mine Development												
Stripping Expenses. Deferred												
Improvements and Developments in Progress												
Storage Yards												
Retail Yards												
Miscellaneous Non-Operating Property												
TOTAL												
DEFERRED:												
Prepaid Insurance												
Advanced Royalties												
Prepaid Interest												
Deferred Expenses												
Discount on Bonds Sold												
Prepaid Taxes												
Interest Receivable. Unmatured												
TOTAL												
TOTAL												

FORM 59.—Balance Sheet.

BALANCE SHEET

Liabilities	Balance ....19....	Changes During Fiscal Year ....Mos. to date	Changes During Fiscal Year Month of..............
CURRENT LIABILITIES:			
Notes Payable			
Notes Payable. Affiliated Companies			
Accounts Payable. Current			
Accounts Payable. Affiliated Companies			
Payrolls. Accrued			
Interest. Matured			
Wages Unclaimed			
Rents Accrued			
Dividends Declared			
Dividends Unclaimed			
Unclaimed Bond Interest Coupons			
TOTAL			
DEFERRED LIABILITIES:			
Taxes. Federal Income and Excess Profits			
Taxes Accrued. General			
Interest Accrued. (Unmatured)			
Royalties Not Due			
Liability Insurance Accrued			
Compensation Claims Determined			
Mining Hazard Claims Determined			
Premium on Bonds			
TOTAL			

RESERVES:												
Depletion of Coal Lands. Fee												
Depletion of Coal Lands. Leaseholds												
Depreciation of Mine Plant and Equipment												
Amortization of Mine Developments												
Depreciation and Obsolescence—Storage Yards												
Depreciation and Obsolescence—Retail Yards												
Depreciation and Obsolescence—Miscellaneous												
General Insurance												
Compensation Insurance												
Mining Hazards												
Uncollectible Accounts and Notes												
TOTAL												
FUNDED DEBT:												
Bonds. Authorized and Issued												
Less: Bonds in Treasury												
Mortgages												
TOTAL												
CAPITAL STOCK:												
Common Stock:												
Less: Common Stock in Treasury												
Preferred Stock:												
Less: Preferred Stock in Treasury												
TOTAL												
SURPLUS:												
Sinking Fund Reserves												
Surplus Arising from a Revaluation of Assets												
Surplus Earned Prior to March 1, 1913												
Surplus Earned Subsequent to March 1, 1913												
TOTAL												
TOTAL												

Notes" and otherwise disposed of. (See Contingent Liabilities.)

Notes Receivable—Affiliated Companies.

Charge to this account notes receivable from subsidiary or affiliated companies.

Credit this account with notes collected, discounted, charged to "Reserve for Uncollectible Accounts and Notes" and otherwise disposed of. (See Contingent Liabilities.)

Accounts Receivable—Customers.

Charge to this account all amounts due the company from customers other than notes receivable.

Credit this account with collections, allowances, discounts and amounts charged to "Reserve for Uncollectible Accounts and Notes."

Accounts Receivable—Affiliated Companies.

Charge to this account all amounts due the company from subsidiary or affiliated companies other than notes or amounts representing loans and investments.

Credit this account with collections, allowances, discounts and amounts charged to "Reserve for Uncollectible Accounts and Notes."

Accounts Receivable—Miscellaneous.

Charge to this account all amounts due from miscellaneous debtors for sales of scrap, supplies, services, royalties, etc.

Credit this account with collections, allowances, discounts and amounts charged to "Reserve for Uncollectible Accounts and Notes."

Payroll Overdrafts.

Charge to this account the total of overdrawn accounts of employees on payrolls.

Credit this account with credits from payroll and items transferred from mine office to general office for collection at which time debit Accounts Receivable—Miscellaneous.

Accounts Receivable—Merchandise Department.

Charge this account with the balance of uncollected accounts on store ledgers at close of each month and credit Merchandise Sales.

Credit this account at beginning of each month with balances and charge Merchandise Sales, less any amount transferred to Accounts Receivable—Miscellaneous, for collection through general office which at time of transfer are credited to this account.

Interest Receivable.

Charge to this account the interest accrued on notes, accounts receivable and investments when such interest becomes due.

Credit this account with interest received and amounts charged to "Reserve for Uncollectible Accounts and Notes."

Inventory—Coal.

Charge to this account and credit "Coal Sales" account the value of coal in transit or unconsigned at end of month.

Inventory—Merchandise.

Charge this account with all merchandise purchased by the Merchandise Department for resale, and with incoming freight and drayage on same.

Credit this account goods transferred to other stores, and with the estimated cost of Merchandise sold or used in the operation of the mining plant or store.

Inventory—Materials and Supplies.

Charge to this account the cost of materials and supplies purchased during the month, and inventory adjustments.

Credit this account with the cost of materials and supplies used and sold, and inventory adjustments.

Investments.

If any investments are pledged to secure liabilities, the securities pledged should be so indicated on the balance sheet.

United States Government Obligations.

Charge to this account the total cost of United States Bonds, Certificates of indebtedness and other obligations of the United States other than currency and open accounts.

Credit this account with the book value of obligations sold, and credit or charge the difference between the book value and the selling price to "Profit or Loss on Investments" under "Miscellaneous Income" or "Deductions from Income" as the case may be. A separate ledger or subsidiary ledger account should be kept for each class of these investments.

Bonds—Other than United States Government.

Charge to this account the cost of bonds purchased other than bonds of this company or subsidiary companies. This account also includes bonds of states, municipalities and foreign governments.

Credit this account with the book value of bonds sold, and credit or charge the difference between the book value and the selling price to "Profit or Loss on Investments" under "Miscellaneous Income" or "Deductions from Income," as the case may be.

Mortgages.

Charge to this account money loaned which is secured by mortgages and costs of mortgages purchased.

Credit this account with collections and the book value of mortgages if sold. If sold at a price different from the book value, credit or debit "Profit or Loss on Investments" under "Miscellaneous Income" or "Deductions from Income," as the case may be, with the amount of the difference.

Long Term Notes.

Charge to this account notes receivable due after one year from date.

Credit this account with collections, notes discounted, and amounts charged to "Reserve for Uncollectible Accounts and Notes." (See Contingent Liabilities.)

Stocks of Other Companies.

Charge to this account the cost of stock of other companies purchased, except subsidiary or affiliated companies.

Credit this account with the book value of stock sold. If sold at a price different from the book value, credit or debit "Profit or Loss on Investments" under "Miscellaneous Income" or "Deductions from Income," as the case may be, with the amount of the difference.

Loans—Affiliated Companies.

Charge to this account amounts loaned to subsidiary or affiliated companies on open account.

Credit this account with collections.

Stocks and Bonds—Affiliated Companies.

Charge to this account the cost of stocks and bonds of affiliated or subsidiary companies.

Credit this account with the book value of stocks and bonds sold, and credit or charge the difference between the book value and the selling price to "Profit or Loss on Investments" under "Miscellaneous Income" or "Deductions from Income," as the case may be.

Reserve and Sinking Funds.

Charge to accounts under this caption, the assets set aside or purchased for Reserve or Sinking Funds. A sub-account should be provided for each fund for which there is a separate purpose, such as "Insurance Fund," "Bond Redemption Fund," "Preferred Stock Redemption Fund," etc.

FIXED ASSETS.

Coal Reserves Undeveloped.

Charge to this account the value of coal undeveloped or that which it is estimated will not be mined within 45 years from present workings. This account will under no circumstances be subject to depletion. If at any time a portion of the coal reserves are within 45 years of being worked, that portion may then be transferred to "Coal Lands" and become subject to depletion.

Coal Lands—Fee.

Charge to this account the cost of available coal lands minable within 45 years if purchased subsequent to February 28, 1913, or at a fair market value as at March 1, 1913, if purchased prior to that date.

Credit this account with the value of coal lands sold. If the selling price differs from the book value, credit or debit the difference to "Profit or Loss on Sale of Coal Land" under "Miscellaneous Income" or "Deductions from Income," as the case may be. In calculating the profit or loss on the sale of coal lands, consideration must be given to the amount of the depletion reserved and surplus arising from revaluation at March 1, 1913, applicable to the land sold.

Depletion should not be credited to this account but to account "Reserve for Depletion of Coal Lands—Fee."

Coal Lands—Leaseholds.

Charge to this account the operator's equity in the fair market value of leaseholds, of coal lands as at March 1, 1913, if leased prior to that date, or at cost if acquired subsequently.

Mine Plant and Equipment.

Charge to this account the cost of Mine Buildings and structures, machinery, equipment, etc., purchased or constructed subsequent to February 28, 1913, or at the fair market value as at March 1, 1913, if purchased or constructed prior to that date. This account includes tipples, power houses, office buildings, side tracks, reservoirs, steam and water lines, machinery and equipment, mine cars, motors, steel rail, wiring, and all equipment necessary in the first instance to bring the mine into an operating condition.

After the mine has been developed to its regular normal output capacity all additional expenditures for minor items of plant and equipment, necessary to maintain but not to increase production, such as motors, mules, mine cars, steel rail, copper wire, etc., should be charged to operation.

Should these normal extensions, additions and betterments be so large as to materially distort the general average of cost if charged to one mine's operation they should be charged to Deferred Expense and distributed to the regular expense accounts, over a reasonable period.

Credit this account with the book value of such units, scrapped, sold, dismantled or abandoned. It is generally desirable that a "Plant" ledger be opened and a record kept in some detail of the items of such property.

Mine Developments.

Charge to this account the cost of shafts, slopes, tunnels, canals, ditches, sump, stable, office, hospital, engine and pump rooms, main gangway, etc., as is required to bring the mine into a regular operating condition, if such expenditures were made subsequent to February 28, 1913. If mine developments were made or purchased prior to March 1, 1913, they should be shown on the books at a fair market value as of that date. All normal developments, required to maintain the output, such as gangways, airways, chutes, digging up rock, grading, ditching, secondary turnouts, minor tunnels, airshafts and other similar mine developments should be charged to operating expenses. Should these normal developments be out of proportion to the regular periodical expenditures for mine developments they should be charged to an account under "Deferred Expenses" and distributed to the regular expense accounts over a reasonable period.

Stripping Expenses—Deferred.

Charge to this account stripping overburden expenses which are not applicable to the coal being obtained from stripping operations during the current accounting period.

Credit this account with a portion of these expenses applicable to coal being obtained by stripping operations during the current accounting period.

The portion chargeable to each ton should be based on the estimated amount of coal to be realized from stripping operations.

Improvements and Developments in Progress.

Charge to this account all improvements and developments in progress which, when finished, will be charged to a fixed asset account. A sub-account for each particular improvement should be kept under this heading until such improvement or development is completed, when it should be transferred to the proper fixed asset account.

All improvements and developments should be made under SPECIAL WORK ORDERS, approved by the proper officers. All charges for work done under these orders should be charged in total to account "Improvements and Developments in Progress" and in detail to each "Special Work Order."

The "Special Work Orders" should be numbered consecutively and all entries chargeable to such orders should indicate the order number to which they are applicable.

Storage Yards.

Charge to this account the cost of storage yard land, buildings, machinery and equipment if purchased or constructed subsequent to February 28, 1913, or at a fair market value as of March 1, 1913, if purchased or constructed prior to that date.

Credit this account with the book value of storage yard land, buildings, machinery, etc., sold, destroyed, dismantled or abandoned.

Retail Yards (other than at the mine).

Charge to this account the cost of retail yard land, buildings, machinery and equipment (other than at the mine) if purchased or constructed subsequent to February 28, 1913, or at a fair market value as of March 1, 1913, if purchased or constructed prior to that date.

Credit this account with the book value of retail yard land, buildings, machinery and equipment, sold, destroyed, dismantled or abandoned.

Miscellaneous Non-operating Property.

Charge to this account the cost of miscellaneous non-operating property if purchased or constructed subsequent to February 28, 1913, or at a fair market value as of March 1, 1913, if purchased or constructed prior to that date.

This account includes the investment in physical property such as surface land, town lots, farm lands, timber lands, farm buildings, farm machinery and equipment, miners' dwellings, dwellings not occupied by miners, stores, business blocks, parks and other property which is entirely distinct from and not used in connection with the mining operations.

Sub-accounts should be kept under this heading for each class of property.

Credit this account with the book value of property sold, destroyed, dismantled, or abandoned. Credit the account also with any tract or panel of land that is required in mining operations and charge the proper operating asset account.

DEFERRED.

Prepaid Insurance.

Charge to this account prepaid insurance premiums not applicable to the current accounting period.

Credit this account with amount charged periodically to the different insurance expense accounts.

Advanced Royalties.

Charge to this account royalties paid in advance and credit with royalties charged royalty expense account, when the coal, to which these royalties are applicable, is mined. Charge unrecoverable advanced royalties to account "Royalty."

Prepaid Interest.

Charge to this account prepaid interest on notes, accounts, etc., not applicable to the current accounting period.

Credit this account with such interest as is charged to interest account during the current accounting period.

Deferred Expenses.

Charge to sub-accounts under this heading all expenses which are to be charged to future periods and credit with amounts so charged.

This account should include only such expenses as large purchases of mine cars, etc., and repairs which have a continuing value, the expense of which will be distributed over the ensuing year. This account includes all additions, extensions and improvements which do not add to or increase the output.

No charge should be made to this account for any expense or loss that has not a continuing value such as losses on account of accidents, fires and floods, etc., the reserve for which has been insufficient.

Discount on Bonds Sold.

Charge to this account the discount on bonds sold which is chargeable over the life of the bonds.

Credit this account and charge "Premium and Discount on Bonds—Net" with the amount of discount applicable to the current accounting period.

Prepaid Taxes.

Charge to this account the taxes prepaid which are applicable to subsequent accounting periods.

Credit this account with prepaid taxes applicable to the current accounting period and charge the various tax expense accounts.

Interest Receivable—Unmatured.

Charge to this account monthly the interest accrued on notes, accounts receivable and investments.

Credit this account and charge "Interest Receivable" with the amount of interest receivable which becomes due.

Balance Sheet Accounts—Liabilities.

Current Liabilities.

Notes Payable.

Credit to this account notes payable issued, except notes of affiliated companies, and charge with notes paid.

Notes Payable—Affiliated Companies.

Credit to this account notes payable due subsidiary or affiliated companies and charge with notes as paid.

Accounts Payable—Current.

Credit to this account all creditors' and other accounts payable, other than inter-company accounts, and charge with payments made.

Accounts Payable—Affiliated Companies.

Credit to this account accounts payable due subsidiary or affiliated companies and charge with payments made.

Payroll Accrued.

Credit to this account the total of all payrolls for each accounting period. Charge this account with salaries and wages paid.

Interest—Matured.

Credit to this account the amounts of interest on interest bearing indebtedness which matures during the current accounting period.

Charge this account with amounts of matured interest paid.

Wages—Unclaimed.

Credit to this account all unclaimed wages. Charge this account with unclaimed wages paid or credited to income.

Rents Accrued.

Credit to this account during each accounting period all accrued rents not including property rented on a royalty basis. Charge this account with rents paid.

Dividends Declared.

Credit to this account dividends declared. Charge it with dividends paid.

Dividends—Unclaimed.

Credit to this account all unclaimed dividends. Charge the account with unclaimed dividends paid.

Unclaimed Bond Interest Coupons.

Credit to this account all unclaimed interest coupons. Charge with unclaimed interest coupons paid.

DEFERRED LIABILITIES.

If any deferred liabilities become due and are not paid immediately, the amount of such liabilities due and unpaid should be shown on the balance sheet as current liabilities.

Taxes—Federal Income and Excess Profits.

Credit to this account the amount of Federal Income and Excess Profits Taxes which have been determined as due the Government.

Taxes Accrued—General.

Credit to this account during each accounting period, the State, Local and Federal Taxes accrued, other than Federal Income and Excess Profits Taxes.

Charge this account with State, Local and Federal Taxes paid, other than Federal Income and Excess Profits Taxes.

Interest Accrued—Unmatured.

Credit to this account the amount of interest accrued on interest bearing indebtedness during the current accounting period.

Charge this account and credit account "Interest Matured" with amounts of unmatured interest when such interest matures and becomes payable.

Royalties not due.

Credit to this account the accrued royalties applicable to each accounting period. Charge this account with royalties paid.

Liability Insurance Accrued.

If the company does not carry its own liability insurance, credit this account with the amount accrued during each accounting period based on the payrolls. Charge this account with liability insurance premiums paid. This account should be used only where the prepaid premium on liability insurance has expired and the company becomes liable for additional premium.

Compensation Claims Determined.

Credit to this account and charge "Reserve for Compensation Insurance" the amount which has been determined as due employees as compensation for injuries sustained and is payable in some future period.

Charge this account with payments made for compensation.

Mining Hazards Claims Determined.

Credit to this account and charge "Reserve for Mining Hazards" the amount of claims arising from property damaged or destroyed by squeezes, explosions, water, etc., the amount of which has been determined as payable, including judgments rendered against the company, etc.

Charge this account with payments made on account of these claims.

Premium on Bonds.

Credit to this account premiums realized from sale of bonds when originally issued. This premium should be proportioned, each accounting period during the life of the Bonds, to account "Premium and Discount on Bonds —Net."

RESERVES.

Reserve for Depletion of Coal Lands—Fee.

Credit to this account the depletion of coal land owned in fee, applicable to the current accounting period.

Depletion should be reserved at a rate per ton ascertained by dividing the book value of the fee coal land by the total estimated tonnage to be realized.

Reserve for Depletion of Coal Lands—Leaseholds.

Credit to this account the depletion of leaseholds of coal lands, applicable to the current accounting period.

Depletion should be reserved at a rate per ton ascertained by dividing the book value of the leaseholds of coal lands by the total estimated tonnage to be realized.

Reserve for Depreciation and Obsolescence of Plant and Equipment.

Credit to this account the estimated amount of depreciation and obsolescence of buildings and structures for the current accounting period. (See article on Depreciation, p. 119.)

Amortization of Mine Developments.

Credit to this account during each accounting period a portion of the cost of mine developments applicable to each ton of coal produced.

The rate per ton to be amortized should be ascertained by dividing the estimated amount of remaining coal obtainable into the book value of the developments. It is optional whether this amount be treated separately or the development added to the value of the mineral (fee or leasehold) and recovered by depletion changes.

Reserve for Depreciation and Obsolescence of Storage Yards.

Credit to this account the estimated amount of depreciation and obsolescence of storage yards and storage yard equipment for the current accounting period.

Charge this account with the original cost (book value) less the scrap value of storage yards, buildings, machinery and equipment destroyed, dismantled or abandoned.

If a sufficient amount has not been reserved to cover the original cost, less the scrap value of storage yards destroyed, dismantled or abandoned, the difference between the original cost, less the scrap value, and the amount reserved for depreciation and obsolescence should be charged as additional depreciation or to a special "Profit or Loss Account."

Reserve for Depreciation and Obsolescence of Retail Yards Buildings and Equipment.

Credit to this account the estimated amount of depreciation and obsolescence of retail yards, buildings and equipment for the current accounting period.

Charge this account with the original cost (book value) less the scrap value of retail yards buildings and equipment destroyed, dismantled or abandoned.

If a sufficient amount has not been reserved to cover the original cost, less the scrap value, of retail yards buildings and equipment destroyed, dismantled or abandoned, the difference between the original cost, less the scrap value, and the amount reserved for depreciation and obsolescence should be charged as additional depreciation or to a special "Profit or Loss Account."

Reserve for Depreciation and Obsolescence of Miscellaneous Non-operating Property.

Credit to this account the estimated amount of depreciation and obsolescence of miscellaneous non-operating property explained under "Miscellaneous Non-operating Property," for the current accounting period.

Charge this account with the original cost (book value) less the scrap value of non-operating property destroyed, dismantled or abandoned.

If a sufficient amount has not been reserved to cover the original cost, less the scrap value of non-operating property destroyed, dismantled or abandoned, the difference between the original cost, less the scrap value, and the amount reserved for depreciation and obsolescence should be charged to accounts as additional depreciation or to a special "Profit or Loss Account."

Reserve for General Insurance.

Credit to this account during each accounting period the amount determined upon by the company as sufficient to cover its insurable risks if the company carries its own insurance.

Charge this account with the value of property destroyed by fire, floods or other insurable accidents beyond the control of the company. If the amount of the reserve is insufficient to cover the loss, the difference between the loss and the amounts reserved should be charged to an account properly designated "Profit and Loss" account.

Reserve for Compensation Insurance.

Credit to this account during each accounting period the amount determined upon by the company as sufficient to cover compensation to be paid employees on account of accidents.

Charge this account and credit "Compensation Claims Determined" with amounts of compensation that have been determined. Also, charge it with all expenses incurred in connection with accidents such as doctors' fees, hospital expenses, etc.

Any adjustments of amounts credited to "Compensation Claims Determined" should be credited or debited to this account.

Reserve for Mining Hazards.

Credit to this account during each accounting period an estimated amount to cover mining hazards.

Charge this account and credit "Mining Hazards Claims Determined" with the amount of claims which have been determined and are payable.

Charge this account also with the expenses of reopening areas closed by squeezes and caves, mine fires, property damaged by explosions, floods, etc., damages to surface and structures on same, including cost of property acquired in settlement of damage claims in excess of the value of such property for the purpose for which it will be used and the expenses of rehabilitating property damaged, not purchased. Also, costs of relocating and building roads and highways, legal and court costs incidental to property and personal damage claims should be charged to this account.

The rate per ton may be increased or decreased from time to time in order to keep this reserve account at an amount representing a safe margin.

Reserve for Uncollectible Accounts and Notes.

Credit to this account during current accounting period an estimated amount to cover losses on uncollectible accounts and notes.

Charge this account with amount of accounts and notes which become worthless.

It is recommended that this reserve be based on a percentage of the sales, as shown by experience.

FUNDED DEBT.

Bonds Authorized and Issued.

Credit this account with bonds (at par) authorized and issued. Charge with bonds (at par) retired.

Bonds in Treasury.

Charge to this account the total of bonds (at par) previously authorized and issued and later repurchased, crediting or debiting the discount or premium to the current year's profit and loss account. When calculating the premium or discount to be debited or credited to the profit and loss account, consideration should be given to the amount of discount or premium previously charged off or amortized if the company issued its bonds at a discount or premium.

Mortgages.

Credit this account with the total amount for which the company becomes liable on mortgages. Charge it with mortgages paid.

CAPITAL STOCK.

Common Stock.

Credit this account with all common stock (at par) issued. Charge the account with all common stock (at par) retired. Common stock repurchased but not retired should be charged to "Common Stock in Treasury."

Common Stock—In Treasury.

Charge to this account the par value of common stock repurchased which was previously sold and paid for.

If this stock is repurchased at a premium or discount, credit or debit the premium or discount to surplus.

This account should be shown on the balance sheet as a deduction from "Common Stock."

Preferred Stock.

Credit this account with all preferred stock (at par) issued. Charge the account with all preferred stock (at par) retired. Preferred stock repurchased but not retired should be charged to "Preferred Stock in Treasury.

Preferred Stock—In Treasury.

Charge to this account the par value of preferred stock repurchased and which was previously sold and paid for.

If this stock is repurchased at a premium or discount, credit or debit the premium or discount to surplus.

This account should be shown on the balance sheet as a deduction from "Preferred Stock."

SURPLUS.

Sinking Fund Reserves.

Credit to this account the amount of sinking fund reserves required to be set aside out of surplus or earnings, as determined upon by the company or specified in mortgages or other agreements.

Charge to this account and credit "Earned Surplus" with the amount of sinking fund reserves when the objects for which the reserves have been set aside have ceased to exist, for example, the payment of bonds and mortgages or the retirement of preferred stock, etc.

Surplus—Arising from a Revaluation of Assets.

Credit to this account the difference between the book values of assets revalued and the fair market value of such assets, as of March 1, 1913.

Sub-accounts should be kept for unrealized surplus arising from revaluation of assets as of March 1, 1913, for each class of assets revalued.

Charge this account with the portion of surplus arising from a revaluation of assets as it is realized and credit the amount to Surplus Earned Prior to March 1, 1913. The amount to be transferred periodically is equal to the difference between the amount of depreciation allowance based on the original book value and that based on the appraised value. The amount so transferred does not constitute taxable income and should not be reported as such. This also applies to the revaluation of coal lands and leaseholds, and to the amounts charged as depletion.

The balance of this account should not be included with the other surplus when calculating the invested capital of the company, as it becomes invested capital only when realized.

Surplus Earned Prior to March 1, 1913.

Credit to this account the amount of surplus earned prior to March 1, 1913, including the amount transferred periodically from surplus arising from a revaluation of assets.

Charge this account with dividends paid from, and appropriations of, this surplus.

Surplus Earned Subsequent to March 1, 1913.

Credit to this account the amount of surplus earned subsequent to March 1, 1913.

Charge this account with dividends paid from, and appropriations of, this surplus.

NOTE.

Contingent Liabilities.

Should the company be contingently liable for notes receivable included in "Notes Receivable" (Customers, affiliated Companies or Long Term) which have been discounted, endorsements, guarantees, etc., such liability should be indicated on the balance sheet as a footnote.

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